Orbis Mediaevalis
II

Inter tempora. The Chronology of the Early Medieval Period

Issues, Approaches, Results

Inter tempora. Cronologia perioadei medievale timpurii

Probleme, abordări, rezultate

Editura MEGA

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Proceedings of the national conference
Arad, 26th–29th September 2018

Lucrările conferinței naționale
Arad, 26–29 septembrie 2018

Edited by | Editori
Florin Mărginean, Ioan Stanciu, Keve László

EDITURA MEGA • CLUJ-NAPOCA • 2019

Volume supported by / Volum apărut cu sprijinul generos oferit de:

Consiliul Județean Arad
Complexul Muzeal Arad

Consiliul Județean Mureș
Muzeul Județean Mureș

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Image on cover I | Imagine coperta I: Photography of the Lower Mures valley, Conop area.
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ISBN 978-606-020-193-9

editura
MEGA

Editura Mega | www.edituramega.ro
e-mail: mega@edituramega.ro

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Foreword

The first *Orbis Mediaevalis* conference was held in 2016 in Lipova. The wide-encompassing name of the conference was in fact addressed to all specialists interested in a longer historical durée, starting with the middle part of the first millennium AD. From an institutional perspective, this academic meeting and the collective volume that followed, as well as the 2018 conference and the present volume, have been supported by the Arad Museum Complex in partnership with the Institute of Archaeology and Art History of the Romanian Academy in Cluj-Napoca and the Mureș County Museum in Târgu Mureș.

This time the approach focuses on the chronology of this period and several perspectives have been suggested: possibilities of differentiating between unitary chronological segments through contents and correct terms; possible solutions for the construction of an inner regional and intra-site chronologies; local developments, supra-regional tendencies, and possible chronological uses; aspects, issues, and solutions regarding the inner (relative) chronology of certain sites (settlements, cemeteries) that have been more extensively investigated; early medieval pottery envisaged as a means of constructing possible intra-site relative chronologies;early medieval pottery as a possible means of setting a relative chronology between sites; and other artifacts with possible chronological value.

The present volume, consisting of ten studies, is thus dedicated to a topic that is permanently in the attention of archaeologists in connection to one period and several time segments significant for the history of Central and Eastern Europe. Even in the sense of chronology, too few approaches of the possible limits of the Early Middle Ages have been published over the last three decades in Romanian specialized literature. One can rather mention timid questions and fewer solutions, but we can note the quiet abandonment of the older syntagm *pre-feudal period* understood – from a Marxist perspective – as a transition period to the feudal means of production, eventually ambiguous through its entire content. One can also note the lack of comparisons between the specific developments in the wider regions that form present-day Romania, consequently also the study of possible chronological differences between them. Finally, there has also been a general lack of debate (usually accompanied by critical thinking) and too few studies researching the various structures of early medieval society, as far as these can be reconstructed. As field researches, especially preventive excavations, have progressed, archaeologists have focused on publishing the results, both archaeological features and collected inventories, among which pottery represents undoubtedly the largest part of the material.

Regarding any historical period, reaching as precise as possible datings is very important. In the case of the early medieval period one acknowledges the poverty of the inventories recovered from settlements but also of those collected from most of the graves, especially of the incineration type. Special interest was thus payed to pottery, interpreted from the perspective of the technological traits of clay pots, the proportions between the different categories, certain tendencies of decoration, and other aspects. The superposition relations (when such have been fortunately identified) between archaeological features provide precious support for establishing a relative chronology inside the sites in question. The Romanian archaeology of the early medieval period can turn in fact to very few data that support an absolute chronology obtained through alternative methods to those that archaeologists usually turn to, mainly with the help of dendrochronology, but also radioactive carbon. The completion of such databases remains a significant goal for the research of the period in question.

Most of the Romanian archaeologists interested in this period took part in the proceedings of the conference entitled *Inter tempora. Cronologia perioadei medievale timpurii. Probleme, abordări* și *rezultate* / *Inter tempora. The Chronology of the Early Medieval Period. Issues, Approaches, Results* (which is also the title of the present volume). Their contributions turn, to various degrees, to chronological issues. This aspect indicates the current interest in such a debate and we hope that the present volume will stimulate researches dealing with the topic.

We wish to thank the reputed professor and researcher of the Early Middle Ages Miklós Takács ["Pázmány Péter" Catholic University Budapest, Hungarian Academy of Sciences, Institute of Archaeology Budapest] for taking part in the conference as special guest and for his contribution to the publication of this volume. We also express our gratitude to all the specialists who have answered our invitation and contribute to the second volume of the *Orbis Mediaevalis* series. Last but not least, we must mention the fact that the present volume could not have been published without the consistent support of the Arad County Council and of the Mureș County Council, to which we are grateful.

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The Decoration of Wheel-thrown Pottery and its Chronological Uses (7th–9th/10th Centuries). Case Study: the Pottery from North-West Romania[1*]

Ioan Stanciu

Abstract: *Such an approach of early medieval pottery from the north-western part of Romania is necessary. Still, the research material available so far is insufficient in quantity and the quality of data, so that the expressed observations and conclusions can be provisional. The decorative motifs and their combinations have been structured according to four main groups, stressing the associations between such motifs. Stronger observations envisage the existence of tendencies in time that can also be noted in the neighboring or farther regions and the fact that early medieval pottery modeled on the fast-turning potters' wheel was less decorated than the pottery modeled on the slow wheel.*

Keywords: *North-West Romania, wheel-thrown early medieval pottery, decoration, chronology.*

Trial excavations and systematic or preventive archaeological researches have been performed in North-West Romania in 38 early medieval settlements (representing a bit more than 26%) out of the 144 such sites that have been recorded not long ago. In the case of 13 of the excavated sites the researches performed were in fact minor trial excavations. The horizontal distribution of the settlements known now indicated again the disproportion between, on the one hand, the sites where excavations were effectuate and the sites simply signaled in the field, and on the other hand the fact that they are artificially concentrated in those micro-regions were ground-level and preventive researches have been more intense (Fig. 1)[2]. One can thus observe beyond doubt that the state of on-site researches and thus the level of knowledge reached so far are insufficient.

In the case of early medieval pottery in general and its decoration, relatively evenly distributed overs extended areas and regarding the possibilities of supporting the chronological identification of the pottery, specialists have formulated the reasonable opinion that the results of the analyses performed so far are only valid regionally or locally. What is important is to identify certain tendencies of pottery decoration in general, in direct connection to the technological or morphological groups[3].

The decoration of slow wheel-thrown pottery

As everywhere else, pottery made on the slow-turning potters' wheel was almost exclusively decorated before firing. The representative motifs are horizontal lines or stripes consisting of horizontal, straight or wavy lines, the latter created with a comb-like tool. In the entire region under discussion – an actual transition area between the entire Upper Tisa region and the Transylvanian Basin – pots that can be completed or large pot fragments are rare, so that the analysis of the combinations between different decorative motifs can often be relative[4]. The simple listing of motifs

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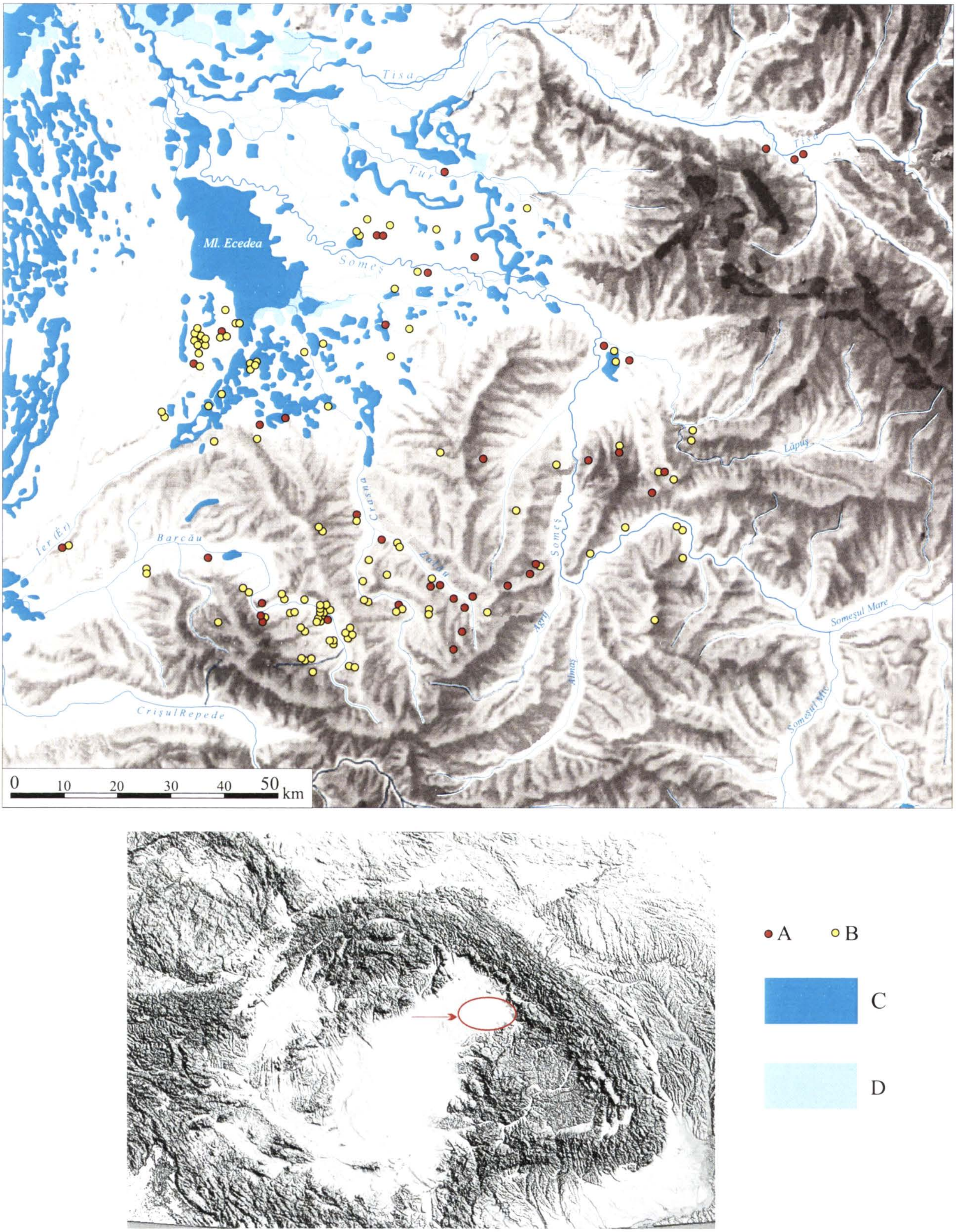
[*] English translation: Ana Maria Gruia.

[1] This study is an adapted version of certain subchapters published in Romanian in Stanciu 2016.

[2] Stanciu 2016, 59–60 Fig. 33–34, 282–287 Appendix 1.

[3] For example Herold 2004, 50.

[4] For the main decorative motifs I used the main classification suggested by Jiří Macháček for the material in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A
B
C
D

Fig. 1. The north-western region of Romania, the north-eastern corner of Hungary, and a segment from the territory of Ukraine, located north of River Tisa. Graphic processing of a map by the Hydrographic Institute of the Ministry of Agriculture (Budapest, 1938), that uses previous cartographic sources (http://foldepites.wordpress.com/terkepek/). Horizontal distribution of the early medieval settlements (second half of the 7th – 9th/10th centuries) in the north-western part of Romania. A—Settlements where archaeological excavations, big or small, have been performed (26.39 %). B—Settlements only identified at ground level (73.61%). C—Areas constantly covered by water (marshes). D—Floodable areas, wet for longer or shorter periods

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Fig. 2. Early medieval settlements in North-West Romania. Distribution of decorative motifs in archaeological features (simple seriation). Each complex motif was recorded only once. The unrecorded decorative motifs feature on materials that were not found inside features. 2: Aghireş "Sub păşune" (Sălaj County). 7: Badon "La Răstignire" (Sălaj County). 20: Bobota "Pe vale/Iertaş" (Sălaj County). 34: Carei "Staţia de epurare a fabricii de zahăr" (Satu Mare County). 42: Cheud "Sub hij" (Sălaj County). 51: Cuceu "Valea Bochii" (Sălaj County). 52: Culciu Mare "Boghilaz" (Satu Mare County). 54: Dindeşti "Ograda lui Donca Aurel", no. 322 (Satu Mare County). 67: Lazuri "Lubi tag" (Satu Mare County). 69: Lăpuşel "Ciurgău" (Maramureş County). 75: Marca "Primăria nouă" (Sălaj County). 79: Mirşid "Pe luncă/Fântâna albă" (Sălaj County). 83: Nuşfalău "Ţigoiul lui Benedek" (Sălaj County). 103: Popeni "Pe pogor" (Sălaj County). 105: Porţ "La baraj" (Sălaj County). 116: Sarasău "Zăpodie" (Maramureş County). 127: Turulung "Vii–Hegyalja" (Satu Mare County). 138: Zalău "Boul. Mihai Viteazul no. 104–106" (Sălaj County). 140: Zalău "Valea răchişorii/Pálvár" (Sălaj County)

(as decorative units) according to their discovery in archaeological features and the combinations of motifs, considered representative for the entire pottery in the analyzed region, indicates four main groups and other groups that are the result of various combinations (Fig. 2; each motif was recorded once, even if it is better represented inside a certain feature). The following main groups have been thus delimited:

A (Fig. 3/1–28). Stripes consisting of horizontal, straight or wavy lines, sometimes with distinct and diverse structures, and various combinations of such motifs.

B (Fig. 3/29–30; Fig. 4/31–34). Stripes similar to those above, associated with wider lines, straight or wavy.

C (Fig. 4/35–48). Simple wider lines, straight or winding, combined or, more rarely, associated with bundles of such lines.

D (Fig. 4/49–59). Less common motifs, often together with simple wider lines, but sometimes also combined with bundles created by comb.

Such a classification, adapted to the peculiarities of the pottery found in the investigated area, even if not fully detailed, might have the function of supporting the relative chronology inside settlements, but also by comparisons with other sites. The results of these series (Fig. 2) and the diagrams in Fig. 5–7 support the observation that the decorative motifs and associations of motifs included in group *A* have the highest frequencies, as single motifs or in various associations with elements from other groups. At the same time, the motifs in groups *B* and *C* were only found in some features and settlements, while the distribution of group *D* is isolated. As compared to the 102 researched archaeological features, taking into account the exclusive presence of group *A* decorations but also in various combinations, it can be calculated to reach a proportion of ca. 90% (Figs. 5–7). Stressing only its uses independent of elements from the other groups, group *A* represents approximately one third of the overall decoration employed on slow wheel-thrown pots (Fig. 7). As exclusive presence, the frequency of group *C* is very restricted, while groups *B* and *D* almost cannot be distinguished (Fig. 2 and Fig. 7). Decorations consisting of associations between groups *A* and *C* can be noted through the relatively high number of features in which they were found. One can also note the somewhat higher presence of groups *A+B* and *A+B+C*, reaching similar proportions (ca. 13% and ca. 12%, respectively). Combinations between groups *B+C*, *A+B+C+D* and *A+C+D* are very rare (Fig. 2 and Fig. 7).

As the results of this analysis indicate, the decoration most frequently found on slow wheel-thrown pottery from North-West Romania between the second half of the 7th century and the 9th/10th century (most probably the first half of the 10th century) is the decoration included in group *A* consisting of bundles of horizontal lines, straight or wavy, namely combinations of such elements, but also combinations with the decorative motifs of other groups. This characterizes the decoration of early medieval pottery produced over wide areas in the eastern half of Europe.

Few settlements have been investigated to a wider degree and published, so the results of comparisons between them regarding the presence of the different categories of decoration can, at most, suggest certain trends (Fig. 8). As an almost exclusive presence, group *A* stands out in the settlement of Lăpuşel "Ciurgău", for which the dating to the 8th century has been suggested[5]. This type of decoration is also well represented in the settlement from Aghireş "Sub păşune", similarly dated to the 8th century and possibly the first half of the 9th century as well, though the situation can be explained through the greater number of features researched there; one cannot exclude the development of the settlement through several stages[6]. This settlement also stands out through the

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Břeclav-Pohansko–Lesní školka: decoration made with a comb-like tool (wavy bundles, horizontal or with motifs impressed with such a tool); decoration made with a single-tooth tool, namely simple lines, undulated or straight, impressions (Macháček 2010, 122).

[5] Stanciu 1994, 308–314.

[6] Băcueţ-Crişan *et al.* 2009, 56.

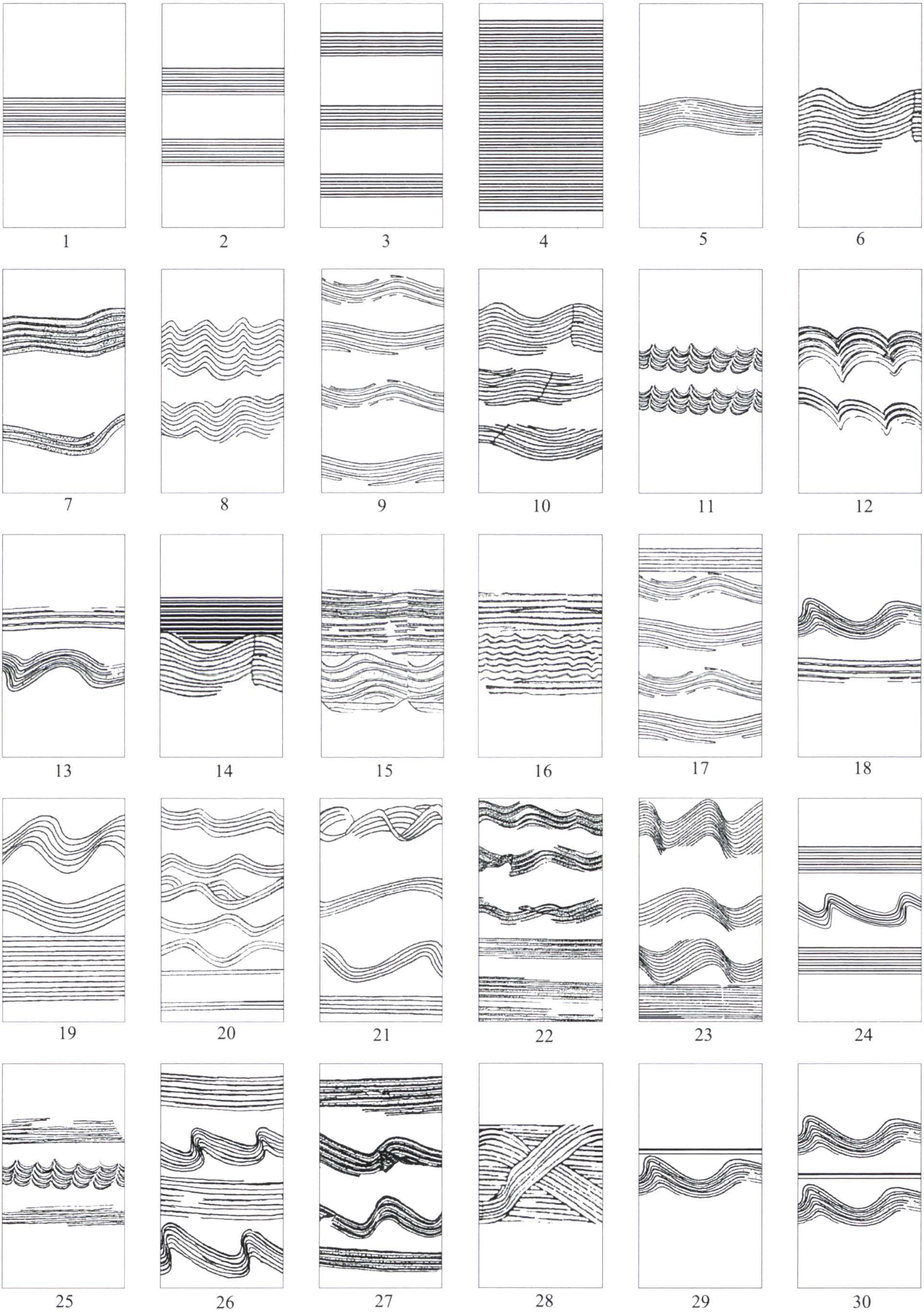
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Fig. 3. Decorative motifs and their associations on slow wheel-turned pottery from North-West Romania. Bundles of straight horizontal lines and bundles of horizontal wavy lines (1–28). Wide horizontal line (straight or wavy) associated with horizontal bundles, straight or wavy, consisting of thinner lines (29–30)

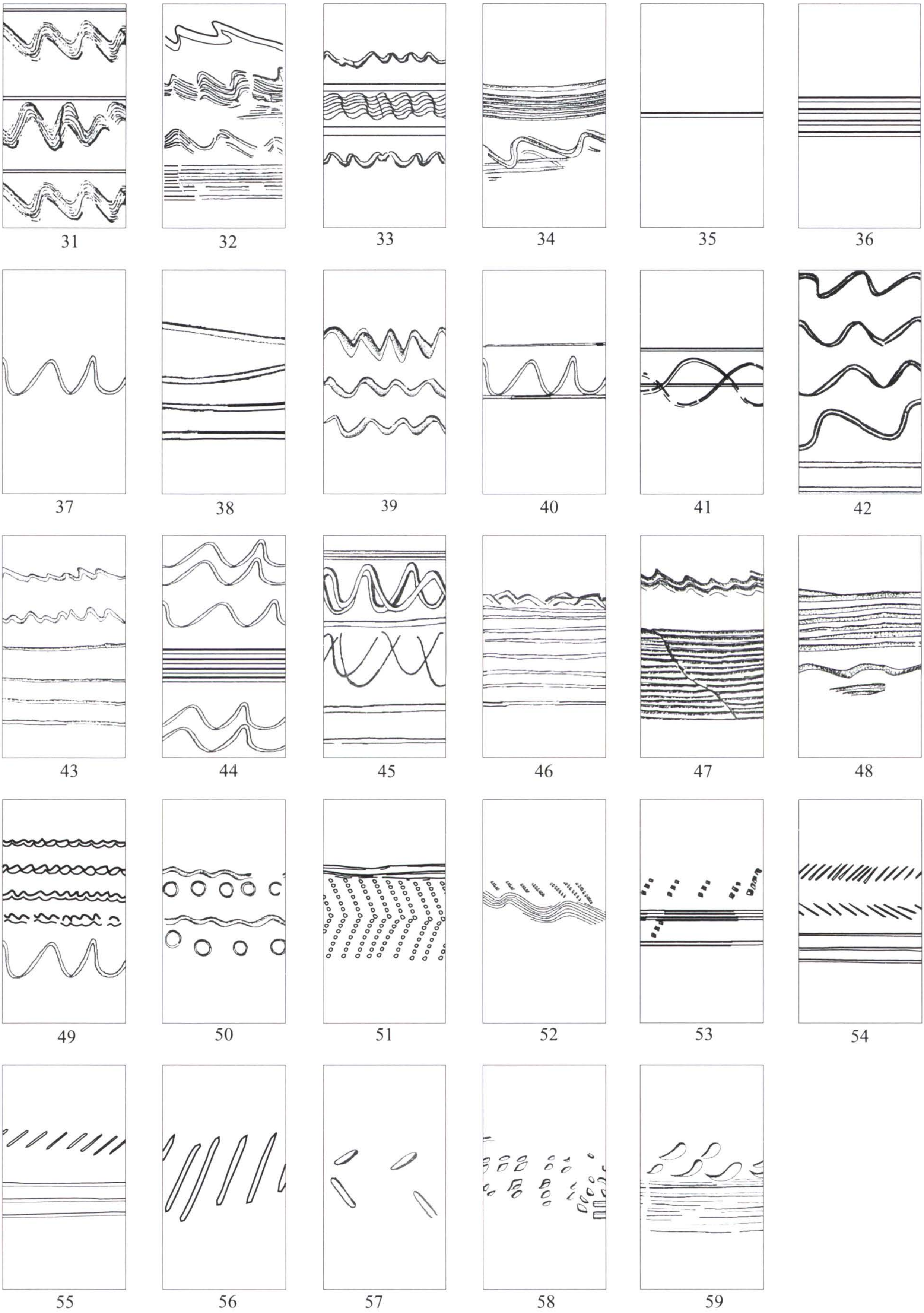
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Fig. 4. Decorative motifs and their associations on slow wheel-turned pottery from North-West Romania. Wide horizontal line (straight or wavy) associated with horizontal bundles, straight or wavy, consisting of thinner lines (31–34). Wider lines or bundles of horizontal straight or wavy lines in various combinations (35–44). Other combinations between wider lines (45–48) and other types of decorations (49–59)

more consistent presence of the association between groups *A* and *C*, just like the settlement in Porţ–La baraj, with a suggested dating to the end of the 8th century and the beginning of the 9th century[7] and the settlement in Zalău "Boulevard Mihai Viteazul", dated with uncertainty to the second half of the 7th century and the first half of the subsequent one[8]. The sites in Aghireş and Porţ are similar to the settlement in Cuceu–Valea Bochii through the analagous frequency of the combination between groups *A*, *B* and *C*. The latter has the suggested dating between the second half of the 8th century and the first half of the 9th century[9]. Through the higher frequency of group *C* decoration, either as exclusive presence or in association with other groups, one also notes the settlement in Porţ (Fig. 8).

Due to the absence of group *A* (not associated with other groups) one should mention the settlement in Zalău "Valea răchişorii/Pálvár". In this case one must also stress the more significant presence of simple and wide lines, straight or undulated (group *C*), sometimes combined with each other, more rarely associated with the motifs of group *A*. The settlement should be mainly dated to the 10th century, maybe even to the second half of that century, and one should also note the similarity with the decoration of a pot discovered in a grave from the (probably corresponding) necropolis that can also be dated on the basis of other artifacts as well[10]. A very similar ornament features on the pottery found in a dwelling in Culciu Mare (on the Lower Someş), but only motifs part of group *A* feature there on some pots. The analogies provided for some of the margin shapes but also for the decoration have supported the possible dating of the feature in question to the second half of the 9th century and the first half of the 10th century[11].

At one end of the diagram obtained on the basis of the decoration and of the features in which it was distributed consists of group *A* by itself, without combinations with motifs included in other groups. A settlement such as the one in Lăpuşel "Ciurgău", first of all, but possibly other neighboring features as well that usually contain a lot of hand-made pottery, might indicate an earlier chronological setting (Fig. 2). Besides, for the settlements in Turulung "Vii" and Crăciuneşti has been suggested a dating to the final two thirds of the 7th century, in continuation of the so-called Lazuri–Pişcolt Horizon in North-West Romania (between ca. the middle of the 6th century and the first third of the 7th century)[12]. Like in other regions, the specific decoration of early medieval pottery features in very isolated cases also in the environment of the settlements in North-West Romania already during a stage that has been tentatively dated to the late 6th century and the first third or the first half of the 7th century, but on hand-made pots and, most likely, as a result of adopting the decoration on pots made on the slow-turning potters' wheel[13]. The ornament on the upper part of a hand-made pot from the earlier settlement in Lazuri renders the so-called "coffered decoration" that one notes on hand-made pottery already during the second half of the 6th century and the first half of the subsequent century, but more frequently features on slow wheel-thrown pottery made during the subsequent period[14].

For the 10th–11th centuries, the decoration incised with a comb-like tool, namely various combinations between bundles of wavy or straight lines, has been explained as a traditional element inherited in the Carpathian Basin from the pottery of the previous period[15]. The results of the

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[7] Matei, Băcueţ-Crişan 2011, 53–63.

[8] Băcueţ-Crişan S., Băcueţ-Crişan D. 2003, 51–56.

[9] Băcueţ-Crişan 2006, 55–56.

[10] Băcueţ-Crişan S., Băcueţ-Crişan D. 2003, 41–46, 64–66; Băcueţ-Crişan 2015, 33–52.

[11] Stanciu 1996, 71, 72, 75–77. If this dating is correct, one must stress the association of show-wheel turned pottery (representing the majority) and the fast-wheel turned and hand-made pottery types.

[12] Stanciu, Bader 2003; Stanciu 2011, 297.

[13] Stanciu 2011, 243, 244 Fig. 136/10.13.17.

[14] Fusek 1994, 306; Guštin, Tiefengraber 2002, 50 Fig. 7/3; Kuna, Profantová 2005, 507 Fig. 258/1; Gutjahr 2002, 148 Fig. 1, 149–150.

[15] Merva 2014, 199–205, with references to discussions and bibliography. The idea that certain traditional elements

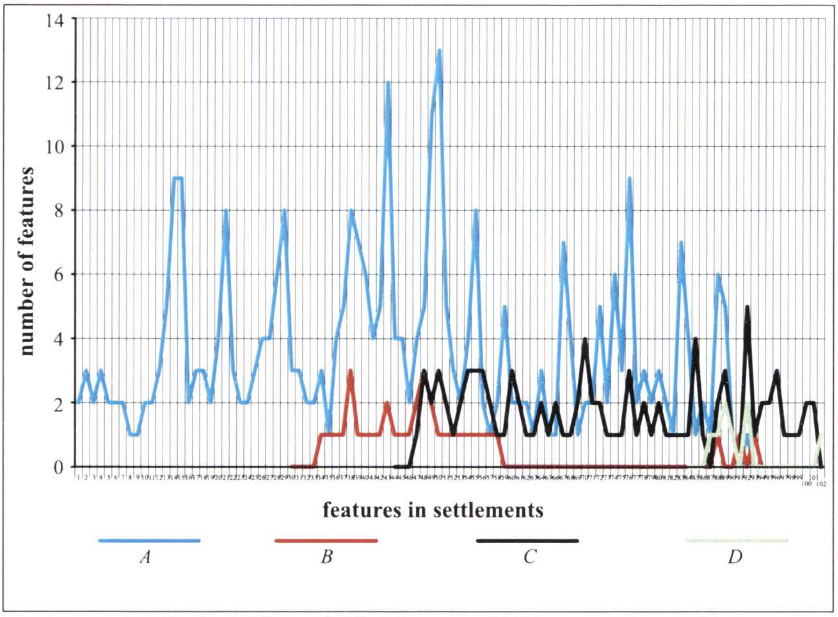

Fig. 5. Quantitative distribution of groups of decorative motifs on pottery modeled on the slow-turning potters' wheel in the early medieval settlements in North-West Romania (frequency according to the number of archaeological features in which they were found). For the identification of the features see Appendix 1 (in the column containing the indication "feature" the number between parentheses indicates the identification number in this table and the number before it details the feature). The sites corresponding to the numbers in the first column are shown in Fig. 2

investigation of the few pots found in graves that can be better dated, similar to those obtained through the research of certain features from settlements that can be chronologically determined to a higher degree of certainty, and according to certain regional trends, during the mentioned period this decoration was employed on ca. 23% of all decorated pots. It was mainly documented in the region of the Upper Tisa and its south-western vicinity, in the present-day county of Heves in Hungary. Pricks created with a twig are characteristic to these areas, just like isolated wavy lines are characteristic to the entire territory east of the Tisa. Specialists have formulated the general observation that the association between the mentioned impressions made with a twig or with the nail, on the one hand, and the wavy lines on the other hand, is present during the entire 10th century. One should nevertheless mention that undulated lines are very rare, just like the impressed motifs under discussion. Last but not least, until the end of the 10th century one encounters many pots without any ornament[16]. Lines set apart apparently appeared during the 10th–11th centuries but were more rarely used, while their frequency increased during the subsequent period[17]. The trend of an increased frequency of simple and wider lines, straight or wavy, often set apart, has also been noted in other regions closer to North-West Romania, explained as a development along the direction of simplifying the decoration. The trend has been connected to the improvement of

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were inherited by the pottery of the first couple of centuries of the second millennium, mainly envisaging the decoration, has been even discussed in the case of the material known from the settlement in Sarasău-Zăpodie, in the north-western part of Romania (the Maramureș Depression), initially dated to the 12th–13th centuries (Popa 1971, 608–623). The chronological identification of some of the dwellings there has been lowered to the 9th–11th centuries (Popa, Harhoiu 1989, 265–269). Specialists have also mentioned complexes that feature a greater quantity of hand-modeled pottery, baking bells, clay pans, but also cooking pots ornamented with notches on the rim, the latter with parallels in the settlement of Crăciunești "Mohelca", located in the same microregion and dated to the second half of the 7th century (Popa 1971, 614–615; Popa, Harhoiu 1989, 269). Even if this were cases of the local development of the same communities, we must take into consideration the existence of distinct chronological stages, in the terms of wider datings, possibly between the 8th/9th centuries and the 12th/13th centuries.

[16] Merva 2014, 199–205, 216–220, with references.

[17] Wavy lines, set apart, are frequent in the inventory of a pottery kiln discovered in Kompolt "Kistéri-tanya", in North-East Hungary, dated to the 9th century (Takács, Vaday 2004). On the pottery from Břeclav-Pohansko–Lesní školka the decorative motifs created with a single-tooth tool started to become prevalent in stage II (the second chronological group), namely the first two thirds of the 9th century (Macháček 2001, 207–2010, 288) and especially during the final third of the same century (Macháček 2010, 186–189, 205, the table on p. 207). This tendency seems to apply to the pottery modeled on the slow-turning potters' wheel from the early medieval cemeteries in Transylvania (Cosma 2011, 66).

the pottery modeling technique starting with the ninth century[18]. This seems to be an aspect also characteristic to the pottery modeled on the slow-turning potters' wheel in North-West Romania.

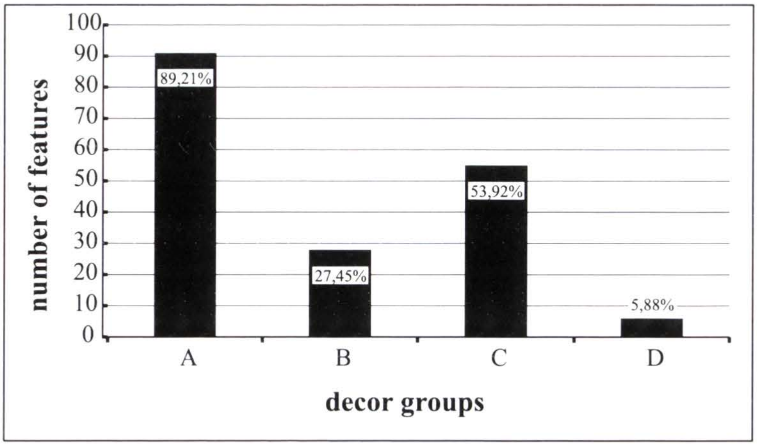

Fig. 6. Slow wheel-turned pottery (North-West Romania). Groups determined for decoration and quantitative distribution (number of archaeological features)

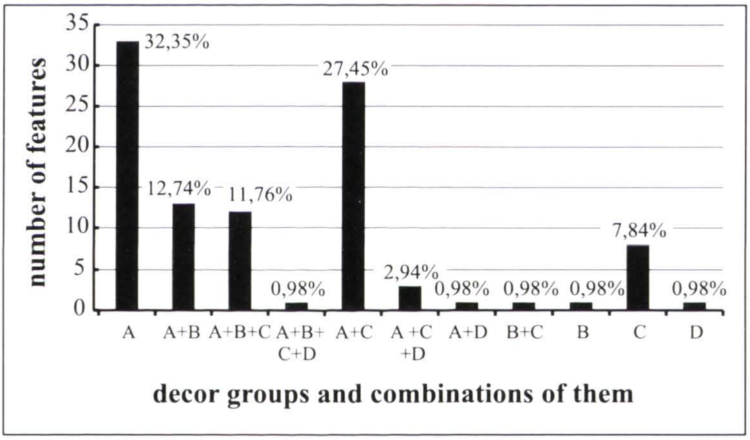

Fig. 7. Slow wheel-turned pottery (North-West Romania). Frequency of decoration groups used independently and combinations of such groups, according to the number of features in which they were found

At the opposite end of the diagram that structures the decoration one finds settlements or features noticeable through the sporadic presence of elements from group *A* and especially through their absence. On the other hand, the dominant elements are the decorative motifs of group *C* and more rarely of group *D* (Fig. 2). At least the pottery from features such as those in Zalău "Pálvar" and Sarasău "Zăpodie" can be dated, in more certain terms, to the period after the ninth century, as indicated by the comparison of decoration and margin profiles with the later material found even in contexts from North-West Romania that can be dated to the tenth-eleventh century. One eventually encounters shapes typical to that period, such as pots with fluted neck or small cauldrons made of clay. The envisaged decoration can even be noted during the subsequent period[19]. In reference to the tenth century and to possible archaeological features dated to that period that did not contain shapes or elements of decoration presumed to have been typical for the period, dating these features to the tenth century and not an earlier period is risky[20]. At least in the sense of a relative chronology inside some of the settlements one must take into consideration the possible existence of an earlier stage, probably subsequent to the ninth century, that can be individualized through the exclusive existence of decoration groups *C–D* or in combinations with decorative motifs included in groups *A* and *B*. A stronger argument in support of this explanation, no matter the more precise chronological identification of the features from a presumed later stage, consists of the superposition relations repeated a couples of times in the settlement of Porţ "La baraj". Thus, features 20 and 42 (with the combination of groups *A–B–C*) overlap feature 23 (decoration from groups *A–C*). Then, feature 29 (group *A*) intersects in fact feature 23 (group *A–C*), indicating that they were not in use at the same time. Also, feature 5 (group *A–C*) cut through feature 6 (a pit) that did not contain any pottery[21]. The horizontal distribution of the decoration in the settlement of Aghireş "Sub păşune" is interesting, but provides limited interpretative possibilities as pottery has not been signaled in a considerable number of researched structures or it was inconclusive in terms of decoration. The combinations that feature decorative motifs of associated groups *A–B–C*, *A–C*, *A–D* and exclusively of groups *B* and *C* stress two groups of features. One group is localized in the south-eastern end of the researched part of the settlement (that also includes several features with associations between groups *A* and *B*), while the second holds a "central position" and features decorations group *A* exclusively (Fig. 10). One cannot exclude the possibility that such a picture indicates distinct stages in the development of habitation there.

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[18] According to at least some researchers: Staňa 1994a, 16; Cech 1994, 56; Vlkolinská 1994, 87–88; Vlkolinská 1995, 37.

[19] Zalău "Boulevard Mihai Viteazul" (Băcueţ-Crişan S., Băcueţ-Crişan D. 2003, 149–151 Pl. 53–54), Zalău "Valea Mâţii" (Băcueţ-Crişan S., Băcueţ-Crişan D. 2003, 153–164 Pl. 56–67), Moigrad "Măgură" (Băcueţ-Crişan 2014, 306 Pl. 126). In the south-western vicinity, the pottery from the settlement in Sânnicolau de Beiuş, dated to the 11th–12th centuries, that display without exception simple wide lines (Popa, Chidoşan 1986, 229 Fig. 4, 231 Fig. 6/a). In the case of Transylvania, the site in Bratei "Nisipărie" dated from the first half of the 12th century and until the turn of the 12th and 13th centuries or the first half of the 13th century, is a good example for the intensity of the presence

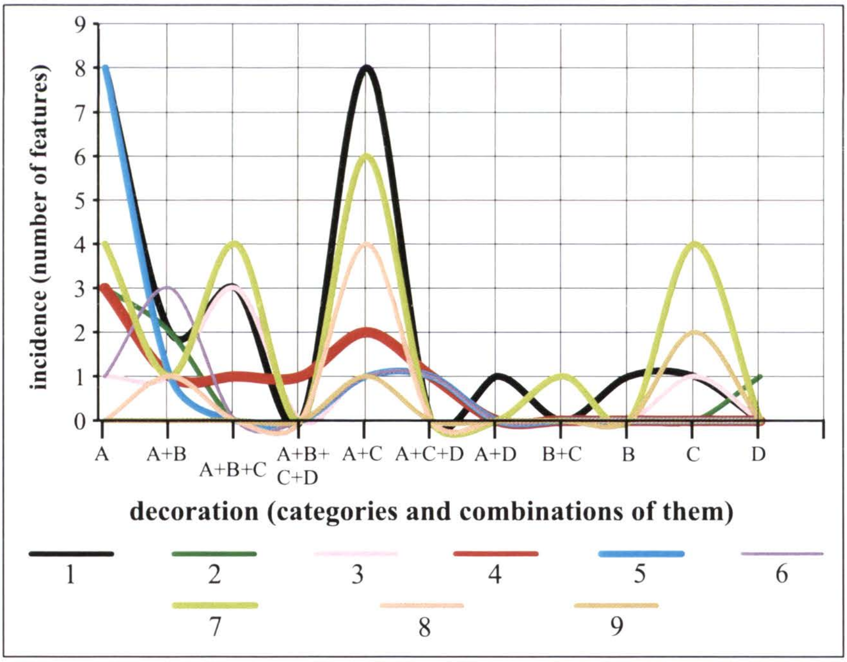

Fig. 8. Early medieval settlements in North-West Romania that have been investigated to a higher degree. Distribution of decoration categories and combinations of such groups. See also Fig. 2 and Appendix 1. Settlements: 1—Aghireş "Sub păşune"; 2—Bobota "Pe vale"; 3—Cuceu "Valea Bochii"; 4—Lazuri "Lubi tag"; 5—Lăpuşel "Ciurgău"; 6—Popeni "Pe pogor"; 7—Porţ "La baraj"; 8—Zalău "Boulevard M. Viteazul"; 9—Zalău "Pálvár"

Combinations of groups *A–D* and *B–C* are missing from the settlement in Lazuri "Lubi tag", groups *B*, *C* and *D* are not present exclusively in features, while feature 113a is the only one in

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of the decoration consisting of wider lines, straight or wavy, sometimes associated with each other (Ioniţă 2009, with numerous examples in the illustration).

[20] The example of the settlement in Aghireş "Sub păşune", with features 35/2008, 48/2008, 120/2009 (Băcueţ-Crişan *et al.* 2009, 290 Pl. 190, 302–308 Pl. 202–208, 357–361 Pl. 257–261, 362 Pl. 262/1–3).

[21] Matei, Băcueț-Crișan 2011, 88 Pl. 4.

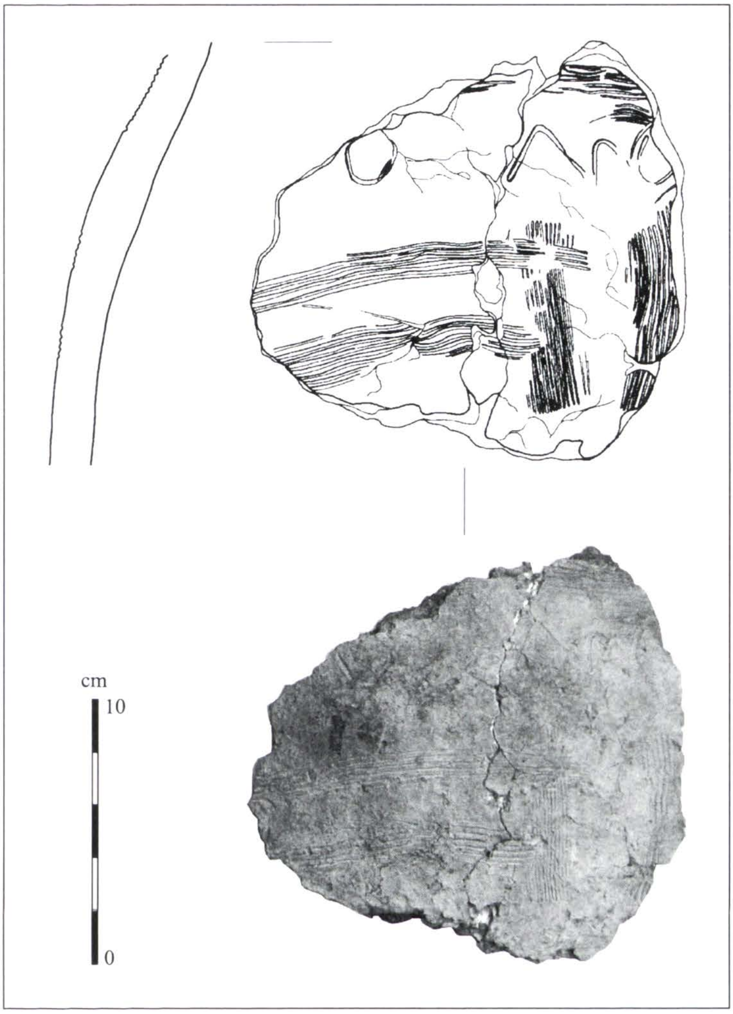

Fig. 9. The early settlement from Lazuri–Lubi tag, Satu Mare County (between ca. the middle of the 6th century and the first third or half of the 7th century). Fragment from a handmade clay pot, featuring a pottery-specific decoration made on the slow wheel. After Stanciu 2011

the north-west featuring associations of the decorative motifs from the four main groups (Figs. 2, 8, 11). The inventory of this pit stands out not only through the localized aspect, but also through the higher proportion of slow wheel-thrown pottery (ca. 74%), though fast wheel-thrown pots are also present, representing ca. 14 %[22]. Last but not least, this feature alone contains relief marks on the bottoms of two pots (Fig. 11/7.11). The decoration on most of the pots is no different from the decoration present on slow wheel-thrown pots from other features. Nevertheless, on the upper part of one item one notes straight under the neck two horizontal rows of "comma-shaped" impressions, the so-called motif made with one's "finger nail" or some tool, placed above a row marked by wider striations (Fig. 11/3; Fig. 14/59). On Arpadian Period pottery, this decoration mainly features besides other related motifs, sometimes associated with simple lines or horizontal bundles, during the tenth-eleventh century[23]. The decoration on the pots from Lazuri is identical, through technique, its position at the base of the neck and sometimes combined with bundles of straight lines, to the decoration on slow wheel-thrown pots from the Byzantine environment in Dobrudja. A good example is the fortification in Păcuiul lui Soare, especially the levels dated to the eleventh century[24]. One can find perfect parallels in West Romania among the material from Biharea, that can also be dated to the 10th–11th centuries[25], while in Transylvania such analog finds are to be encountered in Cluj-Mănăştur (10th–11th centuries or 11th century)[26] and Bratei "Nisipărie" (12th century or also the first half of the 13th century)[27]. A motif identical in shape to the one from the pot in Lazuri features repeatedly on the material from Hungary dated to the Early Arpadian Period[28]. The introduction of the

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[22] As this pit pierced through the corner a dwelling from the earlier settlement, it is very likely that fragments of hand modeled pots were circulated from this feature. Such an explanation is nevertheless excluded for the shards modeled on the fast turning potters' wheel, as such pottery is unusual for the settlement of Lazuri from the inventory of the dwellings dated to the second half of the 6th century and the first half of the subsequent century. Their profiles, together with the rest of their characteristics, match entirely those of such pottery found in the rest of the features dated to the later stage of habitation in Lazuri "Lubi tag".

[23] For example Takács 1996, 156 and Merva 2014, 216–219.

[24] Diaconu, Vîlceanu, 76 Fig. 25/1, 77 Fig. 26/3.9.11–12 etc.

[25] Dumitraşcu 1994, Pl. XXIII/9, Pl. XXVII/9, Pl. CXIX/7 etc.

[26] Examples in Iambor, Matei, Halasu 1981, 135 Pl. II/3 and Iambor, Matei 1983, 143 Pl. IV/1.

[27] Ioniță 2009, Pl. 254/11, Pl. 259/17, Pl. 260/22 etc.

[28] An example in Jankovich, Szatmári 2013, 415–422, 425 Pl. 3/4.

"comma-shaped motif" during the Post-Moravian Period, namely at the turn of the tenth century, is also indicated by the detailed and rigorous analysis of the material from Břeclav-Pohansko–Lesní školka[29]. One notes the interesting coincidence with the dating suggested for the relatively isolated onset of this decorative motif at the Lower Danube (as probable area of origin), namely in the end of the ninth century[30].

There are similarities with the oblong-oval impressions, sometimes curved and even placed in parallel, just like in the north-western part of Romania where they feature in the settlement from Zalău "Valea Mâţii", with a suggested dating to the tenth-eleventh centuries[31] and in the settlement in Zalău "Valea Mâţii"–"Livada veche"[32] (Fig. 4/57). Unchanged, the decoration in question also features in the settlement in Aghireş "Sub păşune", from contexts dated on the basis of spurs to the thirteenth-fourteenth centuries[33]. In the central region of Moravia the decorative motif can be found in identical or very similar shapes on pots tentatively dated to the first half of the tenth century, continuing throughout this century, until the beginning of the subsequent one[34].

Lacking a clear context, pottery sometimes decorated with impressions quasi-identical to the one in feature 113a in the settlement of Lazuri "Lubi tag" was found in the center of the municipality of Lazuri. In both cases, one notes the dominant presence of slow wheel-thrown pottery, but there were also fast wheel-thrown pots; sometimes there were also relief marks on the bottom of pots (Fig. 12/1–20). The obvious differences between the two groups are indicated not only by the completely different, more complicated morphology of the margins of the pots from Lazuri "Centru", but also by the technological production of the latter, mostly with very thin walls (between 4 and 6 mm). Also, the fabric contains finer sand, the pots were very well fired, their surface displays an even color, either brick-red or gray (only in section they always display shades of gray). The latter characteristics, sometimes the thickness of the walls as well, are also characteristic for part of the pots in the inventory of feature 113a (Fig. 11/1–4.9). On the basis of analogies with pottery from geographically closer areas, the material found in the center of the municipality of Lazuri has been tentatively dated to the twelfth-thirteenth century[35].

Pit 113a discussed above also contained two fragments, possibly from the same pot, difficult to say if modeled on the slow or fast turning potters' wheel, that display horizontal parallel rows of lozenge-shaped or oval impressions. On one of the fragments these alveoli feature besides two wider parallel lines (Fig. 11/13.15). This ornament, rendered identically on the fragments from Lazuri, features in North-West Romania in structure 111/2009 from the settlement in Aghireş "Sub păşune"; in one of the cases in the latter location, the ornament was associated with oblong impressions similar to those found on tenth-eleventh-century pottery. The feature has been dated to the eighth-ninth centuries, probably based on the presence of several fragments of hand-modeled clay pans[36].

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[29] Macháček 2010, 189 (chronological group 5). In the cemetery of Čakajovce (South-West Slovakia) this decorative motif, usually associated with others, presumably appeared first in the horizon dated to the 9th century and the first half of the 10th century (Rejholcová 1995b, 126 Pl. XXXVI/1, 153 Pl. LXIII/17, 156 Pl. LXVI/3; Rejholcová 1995a, 41 Fig. 14c).

[30] Fiedler 1992, vol. 1, 123, 153.

[31] Băcueţ-Crişan S., Băcueţ-Crişan D. 2003, 156 Pl. 59/1.6, 163 Pl. 66/6. Here one only encounters cogwheel-made decoration that was probably first used in the Carpathian Basin during the 11th century and mainly spread starting with the second half of that century (Merva 2014, 205, 2017, with references).

[32] Băcueţ-Crişan *et al.* 2009, 141 Pl. 41/2.

[33] Băcueţ-Crişan *et al.* 2009, 28, 274 Pl. 174/3.29, 292 Pl. 192/5.7. In Transylvania the motif is often encountered on the pottery of the so-called "Ciugud Culture" dated between the tenth and the 11th/12th centuries (Simina 1995; Horedt 1984, 59, 24 Fig. 11/2.6.9.11.17 etc.).

[34] Staňa 1994b, 274–278, 277 Fig. 11/6, 278 Fig. 12/2, 280 Fig. 14/3.8.

[35] Stanciu 2003, 257–260, 276–277 no. 16, 309 Pl. XIII/8–10, 310–312 Pl. XIV–XVI.

[36] Băcueţ-Crişan *et al.* 2009, 37, 343 Pl. 243. One should keep in mind the observation that features dated to the 10th–11th centuries have also been identified in this settlement. Examples of decorations consisting of "rows of pricks"

Overall, the pottery from the settlement in Lazuri "Lubi tag" is similar to the one known from the settlements in the area where River Someş flows into the Tisa, in North-East Hungary. The most significant is the one in Vásárosnamény "Gergelyiugornya", located ca. 50 km north-west from the settlement in Lazuri, and one should note that there, as well as in Lazuri, all three technological categories are present, i.e. slow wheel-thrown, fast wheel-thrown, and hand-made. Also, like in Lazuri, archaeologists found no clay cauldrons and no pots with fluted neck. The "comma-shaped decoration" is relatively well represented in the settlement from Vásárosnamény and in others, while some pots feature alveoli identical to those on some of the shards founds in pit 113a from Lazuri. The settlement in question from North-East Hungary has been dated on the basis of analogies, sometimes identified in too distant regions, to the 9th–11th centuries, envisaging an interrupted habitation during this period, in two stages[37].

Apparently, with the mentioned exceptions, the decoration on the pottery found in the pit from Lazuri is the same as on the rest of the slow wheel-thrown pottery from this settlement[38]. Still, one can note the fact that it is distributed on almost the entire height of the pots, as indicated by the items that have been entirely preserved or can be reconstructed to a larger degree (Fig. 11/2.4.10–11); one also notes the higher frequency of stripes consisting of straight lines set apart. These aspects have been noted in connection to the pottery discovered in a pottery kiln from Kompolt "Kistéri-tanya" in North-East Hungary, in the relative vicinity of the area of the Lower Someş that archaeologists have tentatively dated to the 9th century[39]. Some of the pots in pit 113a from Lazuri "Lubi tag" stand out through their very shape, namely the very high position of the line of maximum diameter, i.e. they are very bulgy in the upper third (Fig. 11/2.4.8–9). Though it is not mandatory for the observations related to early medieval pottery from other regions, even closer to the area in question here, to be generally true, the mentioned trend, besides the simplification of the decoration, has been indicated as specific to a later stage[40].

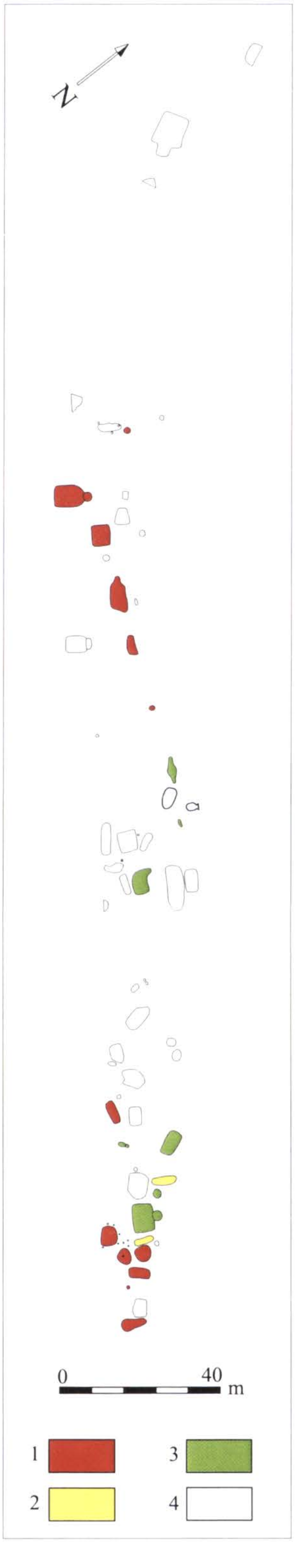

Fig. 10. The settlement in Aghireş "Sub păşune", Sălaj County. Distribution of decoration inside features. 1—Groups *A-B-C*, *A-C*, *A-D*, *B* and *C*. 2—Group *A-B*. 3—Group *A*. 4—Features that were inconclusive regarding the decoration of the pottery in their inventory

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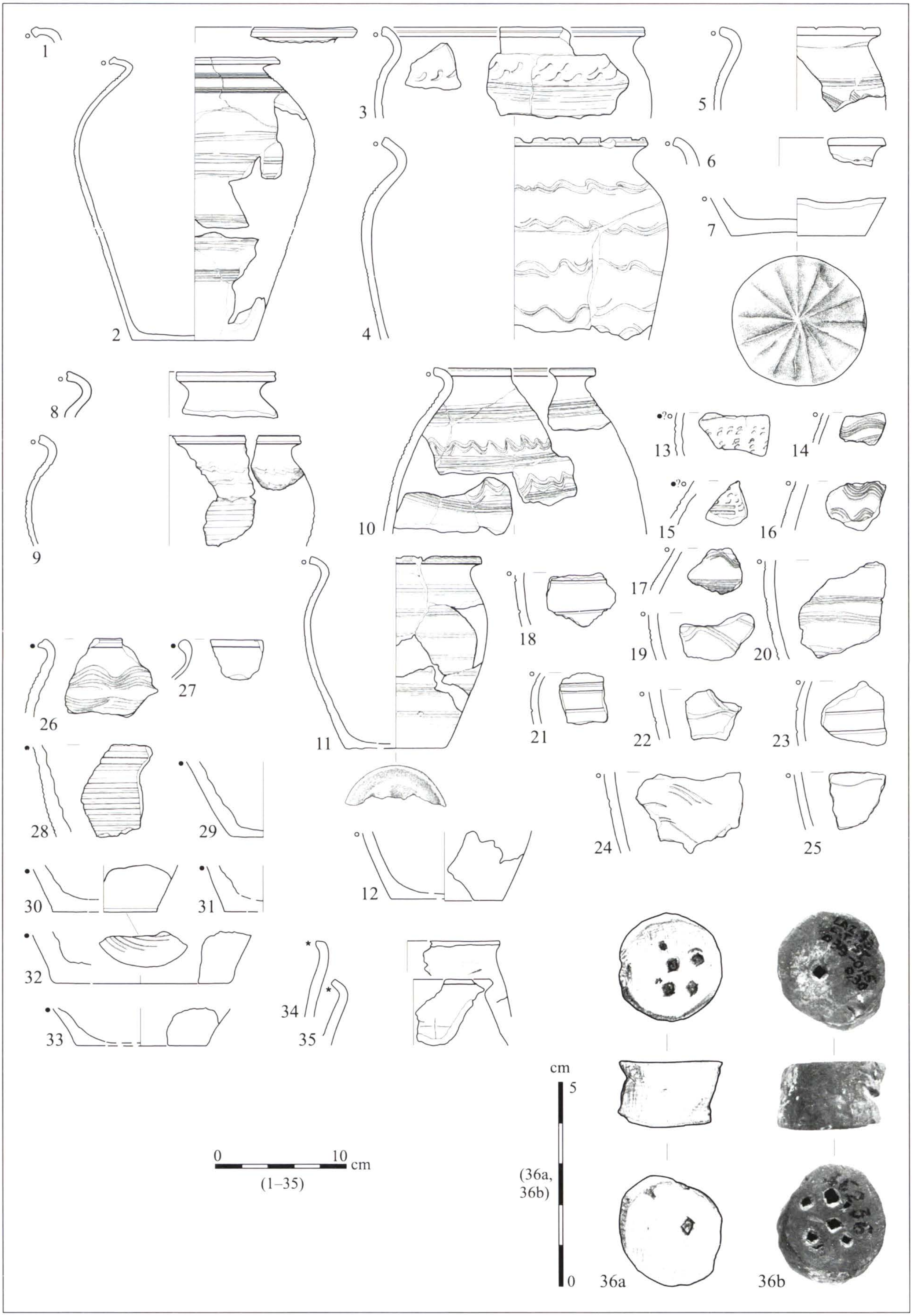
made with a blunt tool found in graves dated to the 10th century: Merva 2014, 248 Fig. 20/2, 248 Fig. 20/2. It is possible, as indicated by the pottery found in the settlement of Bratei "Nisipărie", that in some regions this decorative motif was still used during the 12th century, maybe even in the first half of the 13th century (Ioniţă 2009, Pl. 253/9, Pl. 257/1, Pl. 263/5).

[37] Erdélyi, Szimonova 1985, 394 Pl. III/3.6.8, 396 Pl. V/3.5; Erdélyi, Szimonova 1987, 301 Fig. 12/1–3, 302, 309 Fig. 16/1.3.5; Simonova 2008, 62, 142 Fig. 15/11, 146 Fig. 19/3.6, 152 Fig. 25/1, 154 Fig. 27/7, 163 Fig. 36/2, 165 Fig. 38/11.

[38] The settlement in Sâncraiu Silvaniei "Laz", though only identified on the basis of shards collected from ground level, seems to reveal the same association of finger nail-made decoration and the usual motifs consisting of comb-made straight or wavy bundles (Fig. 12/21–26).

[39] Takács, Vaday 2004, 18–20, 40–42, with references to the illustration.

[40] Chech 1994, 56; Macháček 2010, 186; Herold 2010, 128. The decoration extended over the entire body of the pots is also characteristic for the later stage (end of the 9th century – 10th century) of the settlement in Bucov "Tioca", south of the Carpathians, in Walachia (Comşa 1978, 99).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cm
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cm
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(36a,
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Fig. 11. Lazuri “Lubi tag”. Pottery from the inventory of feature (pit) 113a/1997. *— Hand-made. °— Slow wheel-turned. •—Fast wheel-turned. 36a–b— Probably lead weight, no context

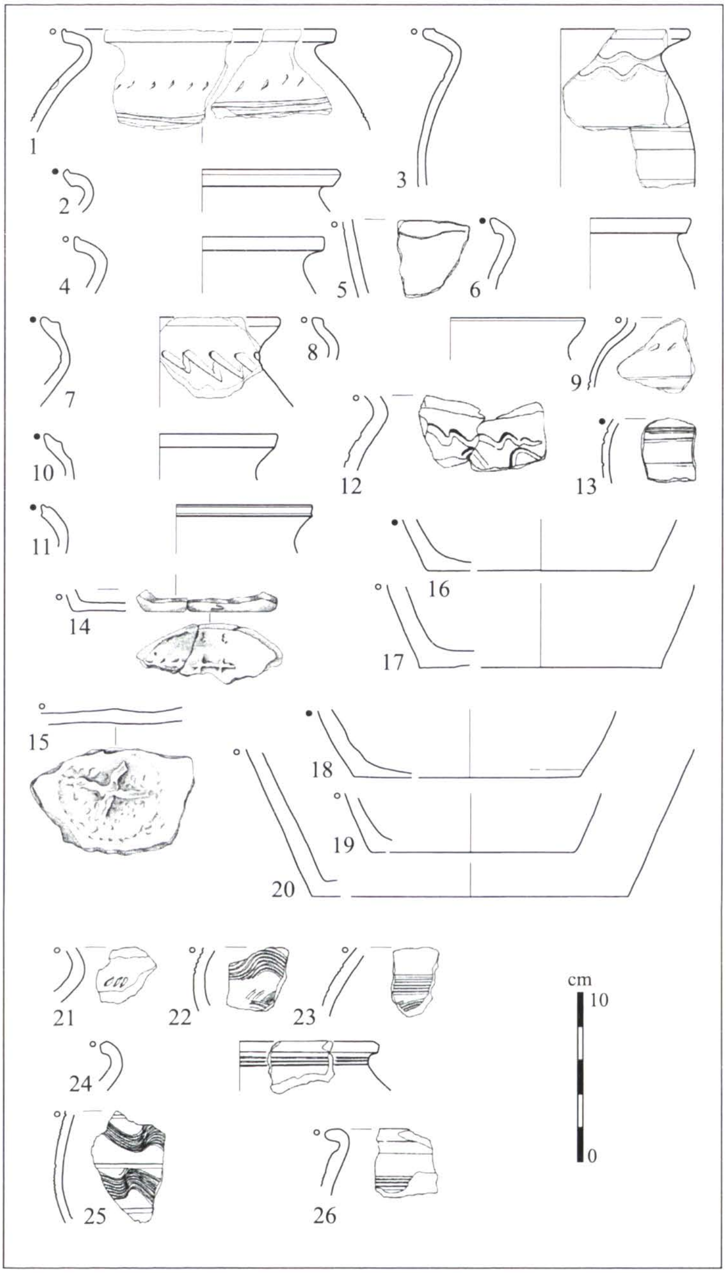

Fig. 12. Pottery found in the center of the municipality of Lazuri (1–20, after Stanciu 2003) and in Sâncraiu Silvaniei "Laz", Sălaj County (21–26). °—Slow wheel-turned pottery. •—Fast wheel-turned pottery

In the lack of convincing indications, neither the pottery found in pit 113a nor the pottery found in the center of the settlement of Lazuri can be dated in exact terms, but, undoubtedly, the expressed observations indicate that the items from the content of the pit hold a chronological position anterior to the pottery with which it has been compared, namely before the 12th century. On the other hand, separating 10th century pottery from 9th century pottery remains a problematic issue as long as one can presume the existence of significant elements of continuity with the previous pottery. Another debatable issue consists of those aspects that could support the delimitation of 10th century pottery from 11th century pottery[41]. Fragments of pots that had been modeled on the slow turning potters' wheel found in the fill of pit 113a from Lazuri, identical in all aspects to the pottery of the same type discovered in the settlement, ensures the connection with the rest of the material and the other features, possibly even the few hand-made shards, unless they were circulated from the fill of an earlier dwelling.

If the datings suggested so far are correct, then the examples of "finger nail"-shaped and structured pricks decorations could be explained as chronological indicators for the latest stage in the development of the settlement, namely the turn of the ninth and tenth centuries or even a certain interval during the first half of the 10th century (Fig. 11/3.13.15).

The fragmentary state of the pottery but also the still rather restricted number of researched archaeological features make the analysis of the quantitative distribution of the decorative motifs found on early medieval pottery from North-West Romania a rather relative endeavor (Fig. 2). The most frequently encountered motif, included in group *A*, but also in its main combinations, consists of a bundle of horizontal lines incised with the comb (decorative motif 1), besides the stripe consisting of undulated lines (motif 6) and the two elements in association (decorative motif 18) (Fig. 3). The difference between the combined groups *A–B* and the independent group *A* consists of the onset of wavy stripes associated with wider horizontal lines (motif 29; Fig. 3). The combination between groups *A–B–C* is more individualized, as inside it one can note not only the presence

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[41] Merva 2014, 199–205.

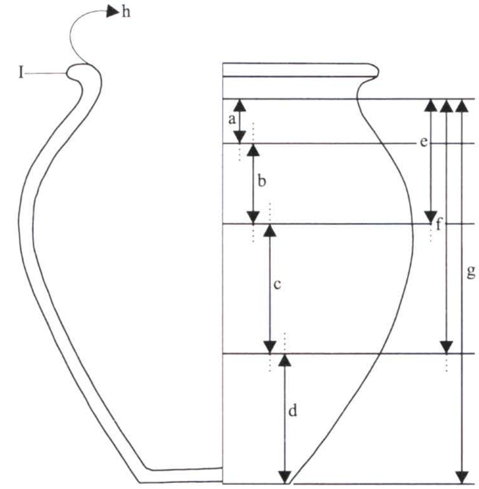

Fig. 13. Distribution of decoration on the different height segments of the vessel

of the main decorative motifs of group *A* but also the onset and higher frequency of the motifs consisting of wider lines, straight or undulated, forming stripes (motif 36) or set apart (motifs 38 and 39); bundles of straight lines are sometimes associated with wavy lines (motif 44; Fig. 4). The combination between groups *A* and *C* stands out through the even stronger presence of the motifs consisting of wider lines (Fig. 2). The features attributed to group *C* not combined with other groups are few but some have a more certain later dating, such as the ones in Zalău "Pálvár", and might indicate the very trend mentioned above. Similarly, the features associated with the motifs of group *D* in which the elements of group A are few (Fig. 2).

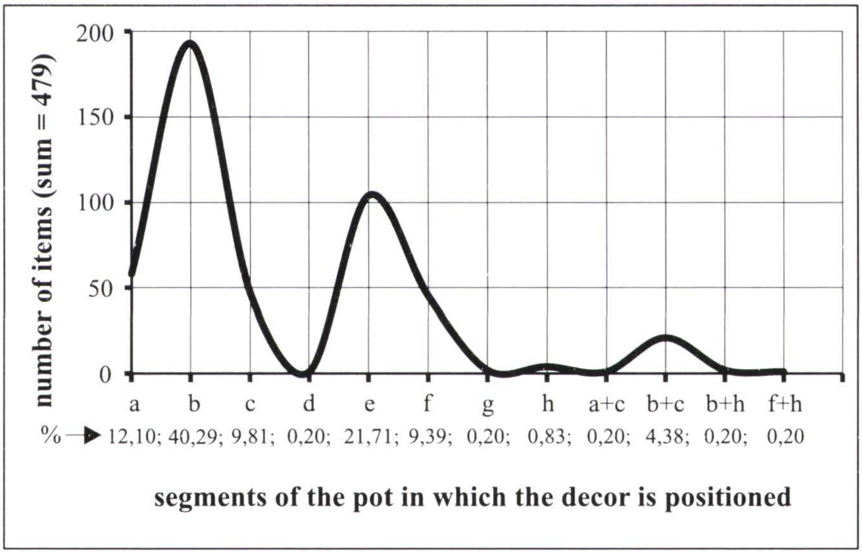

Fig. 14. Slow wheel-turned pottery (North-West Romania). Distribution of decoration on different pot segments. See also Fig. 13

Like in other regions, the pottery from North-West Romania displays few exceptions from an almost stereotypical decorative repertory. One can seldom note the decoration of the inner surface of the margins, without exception consisting of a stripe of undulated lines[42], and the same decoration is present on the rim, the latter situation only encountered in Lazuri "Lubi tag"[43]. In the cemeteries from western Slovakia, for example, this ornament, placed on the inside or on the outside of pot margin or on the rims, seems more frequent in cemeteries that can be dated towards the middle of the ninth century or to the ninth-tenth centuries[44]. In the case of pottery from North-West Romania at least, one cannot count on the status of possible chronological indicator of the decoration placed on pot margins or rims. The same explanation is also true for pottery comb-made decoration or pricks that have generated short oblique rows (group *D*, motifs 52–53) or the so-called "Fischgrätmuster" (motif 51). Usually associated with some of the motifs of the other groups, they feature during an earlier period – see the case of the settlement from Crăciuneşi "Mohelca" that can be dated towards the middle or during the second half of the seventh century[45], but are also present in the settlements Popeni "Pe pogor"[46] and Lazuri "Lubi tag" that should be dated during the subsequent period[47]. The frequency of this decorative motif, placed in columns and rendered in a slightly different manner, combined with stripes of straight or wavy lines, on the pottery found in the settlement from Albeşti–Sighişoara (9th–10th centuries) probably indicates a local trend of early medieval pottery from the valley of Târnava Mare, in the central-eastern part of Transylvania[48].

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[42] Oarța de Sus "Vâlceaua Rusului" (Stanciu 1992, Pl. VII/6–7), Nușfalău "Țigoiul lui Bendek" (Băcueț-Crișan 2004, 128 Pl. V/4), Bobota "Pe vale" (Băcueț-Crișan 2010, 77 Pl. 21), Cuceu "Valea Bochii" (Băcueț-Crișan 2006, 163 Pl. 72/1, 173 Pl. 83/1).

[43] Stanciu 2016, 438, Pl. XLI/6.

[44] Vlkolinská 1994, 89. In some of the settlements from North-East Hungary, edges thus decorated on the inner side seem to have been more frequent than in North-West Romania (Bajkai 2015, 232, 238, 249 Pl. 7/1.4–9, 253 Pl. 11/8, 254 Pl. 12/3).

Oblique lines, shorter or longer, incised with a one-tooth instrument, associated with stripes of wide lines set apart, placed in horizontal rows, sometimes in pairs for symmetry, are a decoration that seems more frequent in the settlement from Sarasău "Zăpodie", in a dwelling dated to the 9th–11th centuries (motifs 54–57)[49]. In other regions as well, these motifs feature mainly in later contexts, dated to the 9th–10th centuries or even during the eleventh century[50]. Thus, the earlier dating of a feature that only contained fragments from two pots (the decoration of one of them has been discussed here – no. 57) is problematic in a settlement such as the one in Aghireş "Sub păşune" that also contains structures that can be dated to the tenth-eleventh centuries[51]. The onset of the ornament consisting of horizontal rows of circles impressed into the raw fabric with a reed stick, alternating with wide wavy lines (motif no. 50) is isolated. It also features on pots from other regions, found in settlements dated between the seventh and the ninth/tenth centuries[52]. One can also note the completely isolated instances of an intentional overlapping of bundles of straight horizontal lines and undulated lines (motif no. 28)[53], an element often encountered on the early medieval pottery from the Lower Danube ("the Dridu Culture"). There is also the absence of vertical or oblique stripes consisting of striations. Just like, based on currently available data, no grey or brick-red pottery modeled on the slow-turning potters' wheel out of fine or brick-red fabric and decorated with polished motifs, specific to the above-mentioned "Dridu Culture" has been produced or used in North-West Romania during the Early Medieval Period[54].

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[45] Popa, Harhoiu 1989, 261 Fig. 8/24.

[46] Băcueţ-Crişan 2006, 111 Pl. 25/6.

[47] Stanciu 2016, 410 Pl. 13/7. The decoration under discussion, with its variants, seems to have been more frequent towards the west, in graves dated to the Middle or Late Avar Period, but also during the 9th–10th centuries. As examples: Garam, Kovrig, Szabo, Török 1975, 53 Fig. 2–grave 7/3, 58 Fig. 7–grave 85/3, 61 Fig. 10–grave 137/4; 164, Fig. 4–grave 30/2 and 34/1 etc.; Daim 1994, 40, Fig. 1/451, 41 Fig. 2/257; Müller 1994, 69 Pl. 2/9, 78 Pl. 7/5. Inside the cemetery in Zillingtal the "Fischgrätmuster" in question features most frequently during the latest phase, essentially between the second half or third of the 8th century and the beginning or the first half of the 9th century (Herold 2010, 12). In the Elba–Saale region and even in Central Moravia this decoration seems to have been relatively frequent even during the early 11th century (Brachmann 1994, 96 Fig. 2, 98 Fig. 3 etc.; Staňa 1994b, 281 Fig. 15/5, 283 Fig. 17/8.10, 284 Fig. 18/13).

[48] Baltag 1994, Pl. II–III, Pl. V/4–5, Pl. VII.

[49] Popa, Harhoiu 1989, 267 Fig. 10/37–39. In North-West Romania this decoration also features on a pot from Berea "Dolláros" (motif 56; Stanciu 2003, 298 Pl. II/12).

[50] Examples: Staňa 1994b, 280 Fig. 14/3, 281 Fig. 15/10–11.13, 282 Fig. 16; Rejholcová 1995a, Pl. CXIX/10–11; Maj 1990, 73 Fig. 16/6, 76 Fig. 19/9, 92 Fig. 35/9 etc.; Wolf 1996b, 237 Fig. 28/1; Kvassay 2007, 65 Fig. 4/13. On the pottery from Slovakia this ornament seems typical for the end of the 9th century and the 10th century (Hanuliak 2016, 117–119, 142). One should add an example from the settlement in Sarasău "Zăpodie", probably dated to the stage of the 12th–13th centuries (Popa 1971, 618 Fig. 15/2).

[51] Băcueţ-Crişan *et al.* 2009, 35, feature 97/2008, 323 Pl. 223.

[52] The settlement in Popeni "Pe pogor" (Stanciu, Matei 1994, 148 with footnote 73,157 Pl. II/2).

[53] One fragment is especially illustrative among other shards with the usual decoration collected from the territory of the municipality of Sanislău, Satu Mare County (Stanciu 2003, 308 Pl. XII/13).

[54] For example Zaharia 1967, 81–88 and Fiedler 1992, vol. 1, 151 Fig. 34/XI.XII.8, 154–155. A single fragment is known, small and problematic (fabric containing sand and pebbles, brownish in color, with burnished net

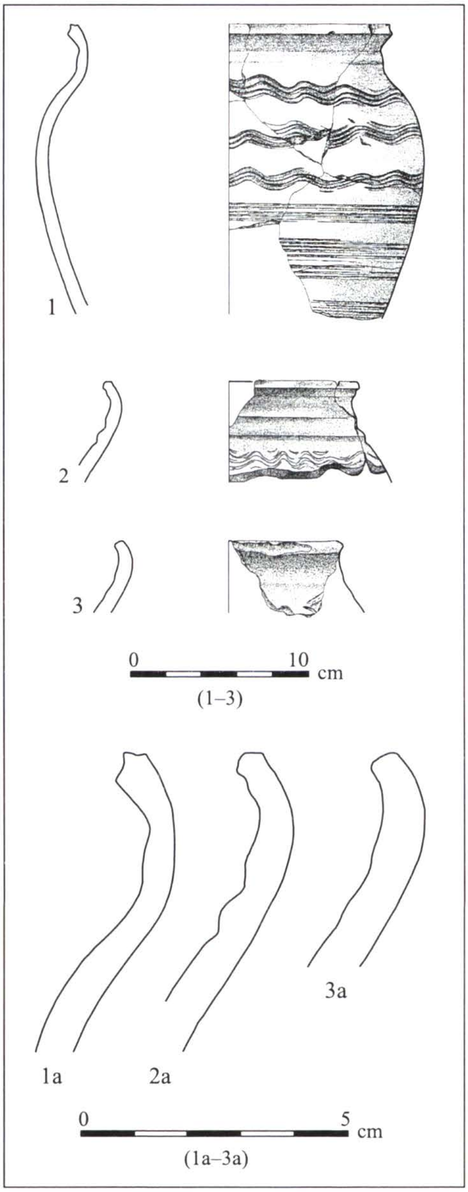

Fig. 15. Slow wheel-turned pottery from the settlement in Lăpuşe "Ciurgău", Maramureş County. Dwelling 3 (1–2) and pit 17 (3). After Stanciu 1994

Due to the extreme rarity of the items preserved to a higher degree, but often also due to the difficulty of attributing the smaller fragments to more precise pot parts, the analysis of decoration distribution as compared to certain pot segments – indicated on Fig. 13 – can only lead to partial results. The analysis of the 479 items, namely isolated fragments and pot parts reconstructed to a certain degree, clearly indicate the marked preponderance of decoration placed in the upper third of pots. This area is the one between the base of the neck and the line of maximum diameter (segments *a* and *b*; Fig. 13–14). As it is possible that the frequently-mentioned pit 113a in Lazuri "Lubi tag" belongs to a later stage, one can envisage the stronger presence of the decoration placed over the entire height of pots, almost down to the base, as indicator of a more recent chronological segment.

More probably in connection to the intention of decorating pots, though not recorded along the other motifs, one can note several elements on the upper parts of some cooking pots found in Lăpuşel "Ciurgău": a slightly protruding girdle that marks the line of the neck (Fig. 15/1), in two other cases looking rather like striated grooves placed under the base of the neck (Fig. 15/2–3). Two of the pots from Lăpuşel were found in the same feature, so it is very possible they were made by the same potter. No doubt, this is not the case of those pots with cylindrical neck decorated with grooves, with or without handles, that are mainly dated to the tenth century[55]. Close to the north-western part of Romania, such a possible ornament on pottery modeled on the slow turning potters' wheel features sporadically in East Slovakia, in settlements dated to the 9th century[56]. Further west, "girdles" similar to the one on the pot illustrated in Fig. 15/1 are much more frequent in settlements such as the one in Březno, the late stage (the 9th century – beginning of the 10th century)[57]. The late presence of these girdles, maybe even towards the beginning of the 10th century, has been indicated in the case of the pottery from Břeclav-Pohansko–Lesní školka[58]. In the environment of the north-western Slavs, the ornament under discussion is rather frequent, for example on the pots found in the settlement in Santok, in the levels also dated to the ninth century[59]. The entirely isolated presence of this possible decoration in North-West Romania, in forms that rather imitate models from elsewhere, is strange. Even more so if one could count on the chronological value of this indicator

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decoration), found in a dwelling in Zalău "Pálvár", dated (most recently) to the 10th century (Băcueţ-Crişan 2015, 52; Băcueţ-Crişan S., Băcueţ-Crişan D. 2003, 43, 64–66).

[55] For examples Merva 2014, 201, 215, 217–218. An older discussion of the Transylvanian discoveries of this sort in Iambor 1985–1986. For North-West Romania see Băcueţ-Crişan 2013.

[56] Nemcovce (Budinský-Krička 1988, 75 Fig. 6/2, 77 Fig. 8/13) and Komárany (Mačala 1983, 188 Fig. 1/6).

[57] Pleinerová 2000, 167, 169, 85 Fig. 49/2, 107 Fig. 71/8, 121 Fig. 85/7 etc.

[58] Macháček 2001, 289, 291; Macháček 2010, 127, 150, 189.

[59] Dymaczewska 1970, for example 174 Fig. 13/17, 179 Fig. 16/4.

as compared to the dating suggested for the pottery in the settlement from Lăpuşel, namely mainly the 8th century[60].

In the researched area, according to the material published so far, the use of orderly, continuous striations on the inner surface of a cooking pot occurs only once, in not very certain terms (Fig. 16/4)[61]. But in a neighboring region, to the south-east, such decorations are characteristic to part of the pottery made on the slow-turning potters' wheel from the Transylvanian settlement of Jucu de Sus–Tetarom III (a few examples on Fig. 16/1–3). I am unaware of other examples found inside the Carpathian Basin[62].

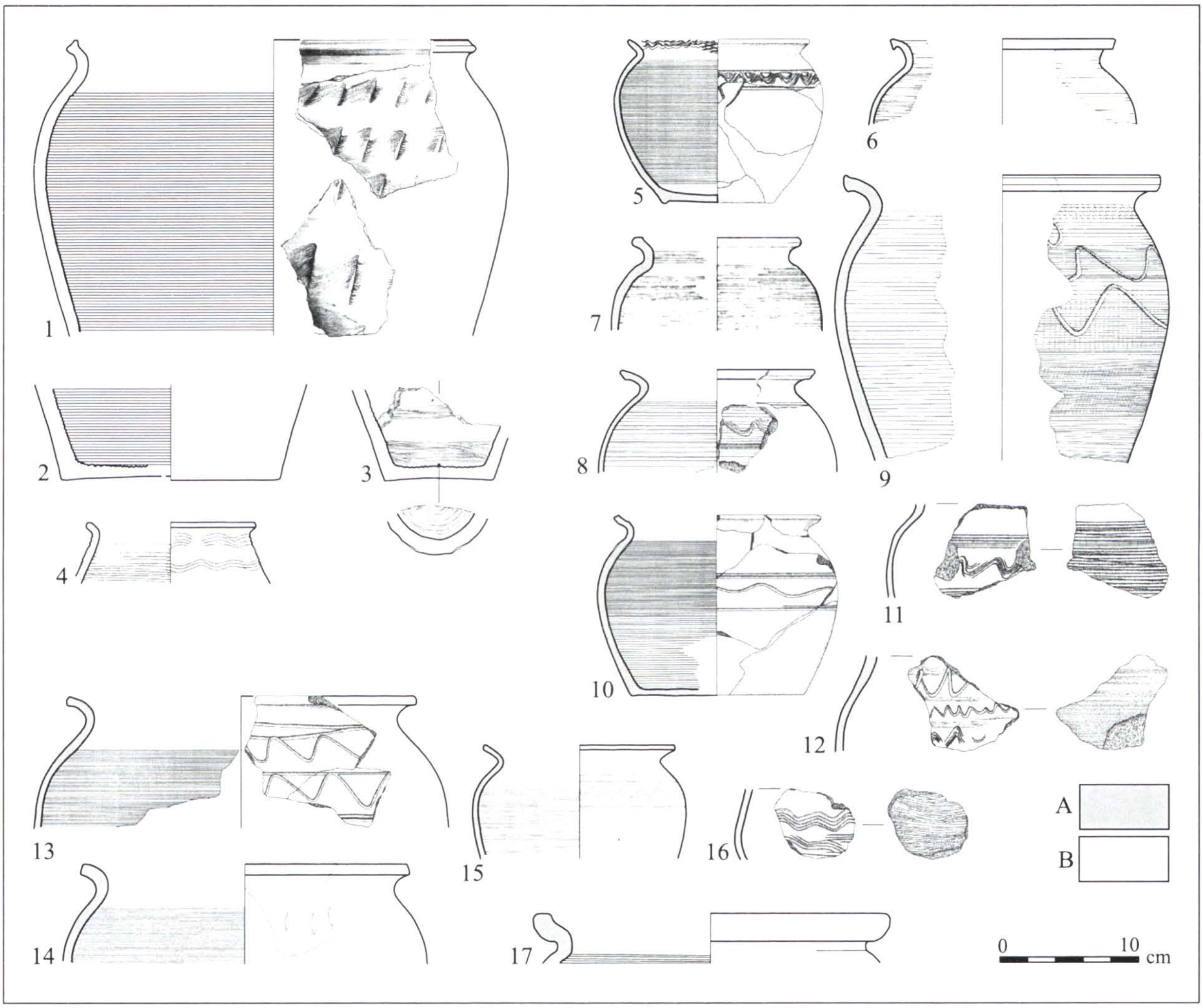

Fig. 16. "Striations" ("Innenrillung") on the inner surface of cooking pots modeled on the slow-turning potters' wheel (10 – hand-made pot adjusted on the wheel). A—Late Antiquity (second half of the 5th c. or late 5th c. – 6th c.). B—8th–9th c. 1–3—Jucu de Sus (unpublished). 4—Porţ "La baraj" (after Matei, Băcueţ-Crişan 2011). 5, 8, 10–11—Teurnia (after Rodriguez 2017a). 6, 9—Invillino (after Bierbrauer 1987). 7, 17—Hrušica pri Podkraju (after Ciglenečki 2000). 13–15—Hemmaberg (after Ladstätter 2000 and Rodriguez 2017b). 12, 16—Ulrichsberg (after Rodriguez 2017c)

Most often these striations ("Innenrillung" in the German specialized terminology) cover the entire interior of the pots up to the line of the neck, including the surface of the bottom itself. Sometimes they are organized in stripes set apart, similar to the decoration that frequently features on the outer side of the pots (Fig. 16/3). This was undoubtedly not an actual decoration, as the decorating logic is absent in the case of closed shapes such as cooking pots. The width of these sunken lines or striations almost always corresponds to the width of the lines from the structure of the decoration on the outer side of the pots, thus indicating the fact that the same tool was skillfully employed, namely a kind of comb[63]. The opinion that these striations, relatively deep and placed in close succession, represent the traces of a fast-turning potters' wheel cannot be supported, as the latter technological marks appear as undulations of the wall[64]. Furthermore, the striations in question often feature on pots modeled on a slow turning potters' wheel and even on hand-made pots corrected on the wheel (an example in Fig. 16/10). The function of this technological gesture remains eventually rather unclear, but it might be connected with the intention of making the inner surface of the pots and thus the thickness of the walls more even, so that they received evenly the heat during broth cooking –though it might also be connected to the fermentation of milk and other dairy products (?).

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[60] Stanciu 1994, 308–313.

[61] The settlement in Porţ "La baraj", feature 17 (Matei, Băcueţ-Crişan 2011, 131 Pl. 47/3).

[62] For example, this aspect is not mentioned together with the indication of certain connections to the pottery of the late antique environment in the Central-South-Eastern Alpine regions. See Macháček 1998, 354–357.

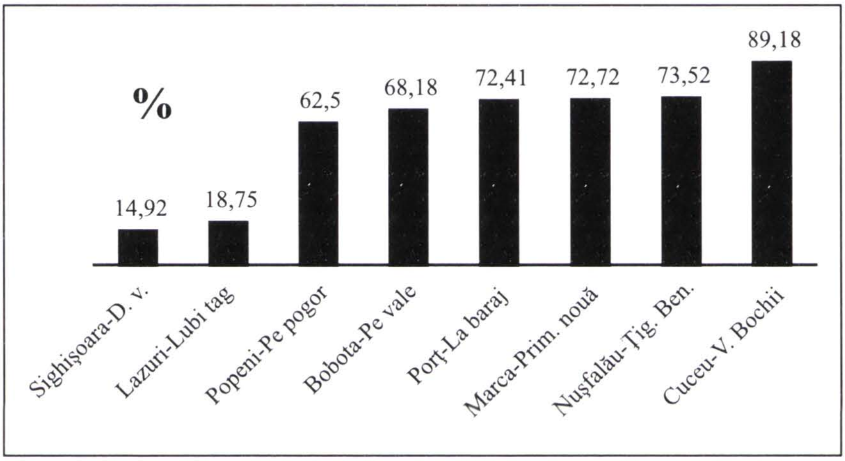

Fig. 17. Settlements in North-West Romania and the pottery kiln in Sighişoara "Dealul viilor" (Transylvania). Fast wheel-turned pottery, quantitative representation of the decorated items out of the entire lot of material. Calculation based on the number of typical pottery fragments

Besides the comb-incised decoration, such inner striations can be noted on the pottery from the eastern part of the province of Noricum and the south-western part of Pannonia ever since the Early Roman Imperial Period and their presence during the fifth and sixth centuries is presumably caused by the perpetuation of a local pottery tradition[65]. Inner striations are characteristic to some of the late antique pottery from the central-south-eastern Alpine regions (examples in Fig. 16/5–17). In Invillino "Ibligo" for example, in the region of Friuli, in the north-eastern extremity of Italy, these inner striations are frequent especially on certain pot shapes and especially in the second half of the fifth century and during the subsequent century[66].

The decoration of fast wheel-thrown pottery

The research of fast wheel-thrown pottery, to the degree it is currently known based on the material from North-West Romania, besides the one from the pottery kiln in Sighişoara "Dealul viilor" in central-eastern Transylvania, along River Târnava Mare[67], supports the first interesting piece of information related to the decoration. A statistical approach supported by the verification of all typical fragments (fragments from upper pot parts and bases, decorated fragments) indicate in clear enough terms the difference between the settlement in Lazuri “Lubi tag”, together with the kiln in Sighişoara, with an almost insignificant proportion of decorated pots (ca. 15–19 %), on the one hand, and the rest of the settlements in the North-West, revealing very high proportions of decorated and fast wheel-thrown pottery, of between ca. 62–89 % (Fig. 17). Still, it is possible that this is a temporary observation, determined by the insufficient quantity of the material. One could envisage chronological differences between the sites or even specificities of the local workshops and even the possibility that some of the decorated shards, especially the tiny ones, belonging to carefully modeled pots thrown on the slow wheel, were sometimes erroneously recorded as being made on the fast-turning potters’ wheel.

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[63] Ladstätter 2000, 151; Ladstätter 2003, 308. One can suspect that the manipulation and control of the tool inside a pot in the making is a difficult task that requires a lot of skill and experience.

[64] Bierbrauer 1987, 197–198.

[65] Rodriguez 1997, 153, 155.

[66] Bierbrauer 1987, 197–198, 208 Pl. 75–77.

[67] Spânu, Gáll 2016.

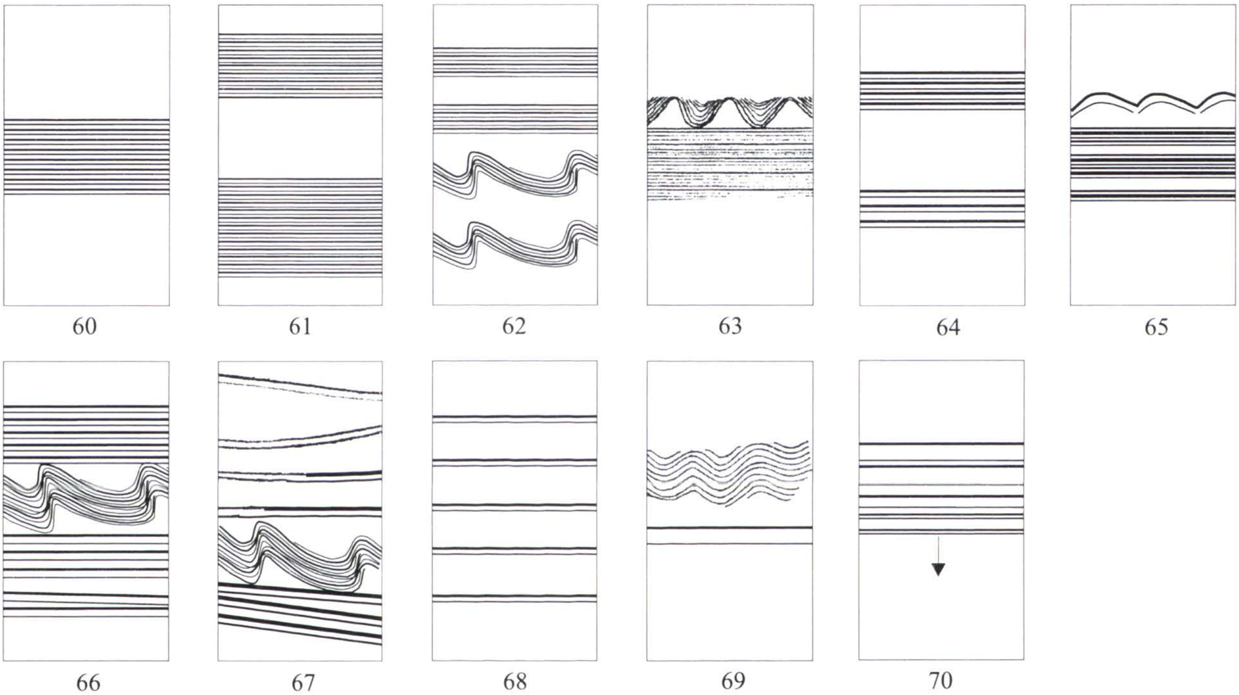

Fig. 18. Decorative motifs and associations of decorative motifs specific to fast wheel-turned pottery (North-West Romania). Numbering continues the numbering of such elements on slow wheel-turned pottery (Fig. 3–4)

The rule is that many of the decorative motifs and their combinations feature on fast wheel-thrown pots just like they do on slow wheel-thrown ones. Almost all of the new elements noted in the first category only display minute differences. The associations between wide lines, traced in succession, and wavy lines finely traced with the comb (Fig. 18/66–67) might be more interesting, but especially remarkable are the less often recorded associations between wide incised lines and the grooves generated by the undulation of the walls (Fig. 18/70 and Fig. 19–20). At least temporarily, the graph in Fig. 19 suggests, in top-down order, the higher proportion of bundles consisting of simple horizontal lines (nos. 1–3), followed by wavy lines, simple or in association with straight stripes (nos. 10, 14, 26). These are components of group *A* decoration on slow wheel-thrown pottery (Fig. 3; Appendix 1). One can also note the proportion of horizontal stripes consisting of wider lines (no. 36) and the proportion of wide wavy lines placed in succession (no. 39). Wide lines, parallel and set apart, also seem to have been frequently employed (Fig. 18/68; Fig. 23/13–14). Such lines, sometimes combined (group *D* in the case of slow wheel-thrown pottery), have sometimes been accepted as a chronological indicator, pointing to the second half of the ninth century or beginning with this century and continuing during the first half of the tenth century[68].

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[68] See footnote 50.

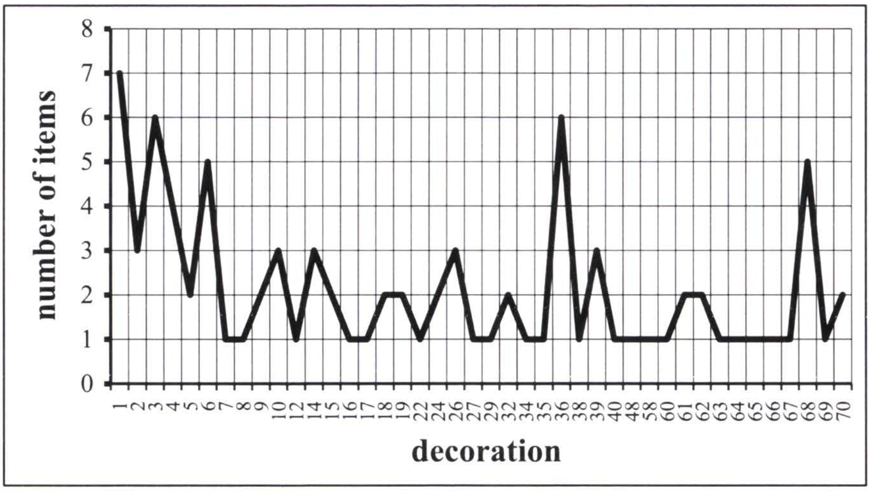

Fig. 19. Fast wheel-turned pottery (North-West Romania and the pottery kiln in Sighişoara–Dealul viilor). Quantitative distribution of the decorative motifs and their combinations. Each motif has only been recorded once in the same settlement.

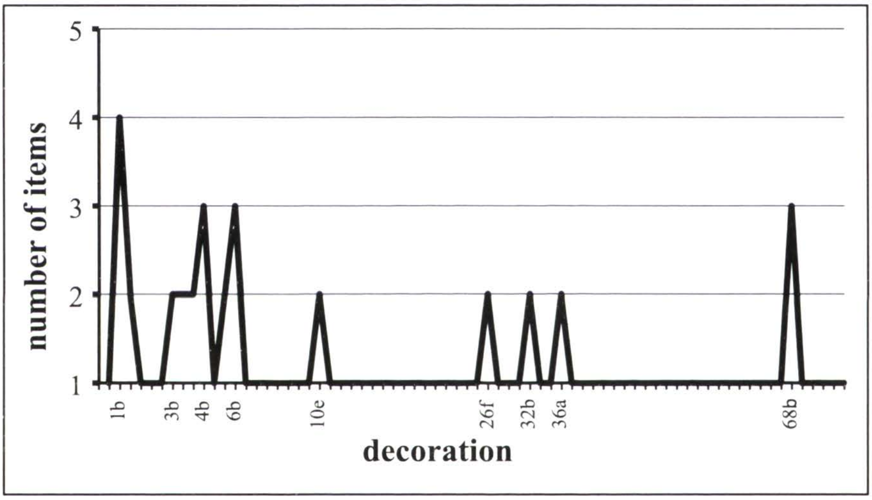

Fig. 20. Fast wheel-turned pottery (North-West Romania and the pottery kiln in Sighişoara "Dealul viilor"). Distribution of decoration in relation to different pot segments. Each motif has only been recorded once in the same settlement. The most often used combinations are stressed on the horizontal axis

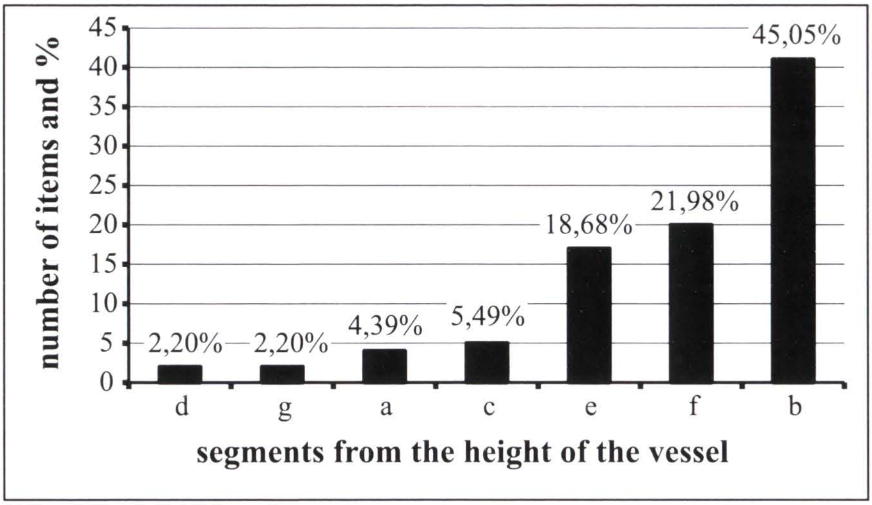

Fig. 21. Fast wheel-turned pottery (North-West Romania and the pottery kiln in Sighişoara "Dealul viilor"). Distribution of pot segments containing decoration

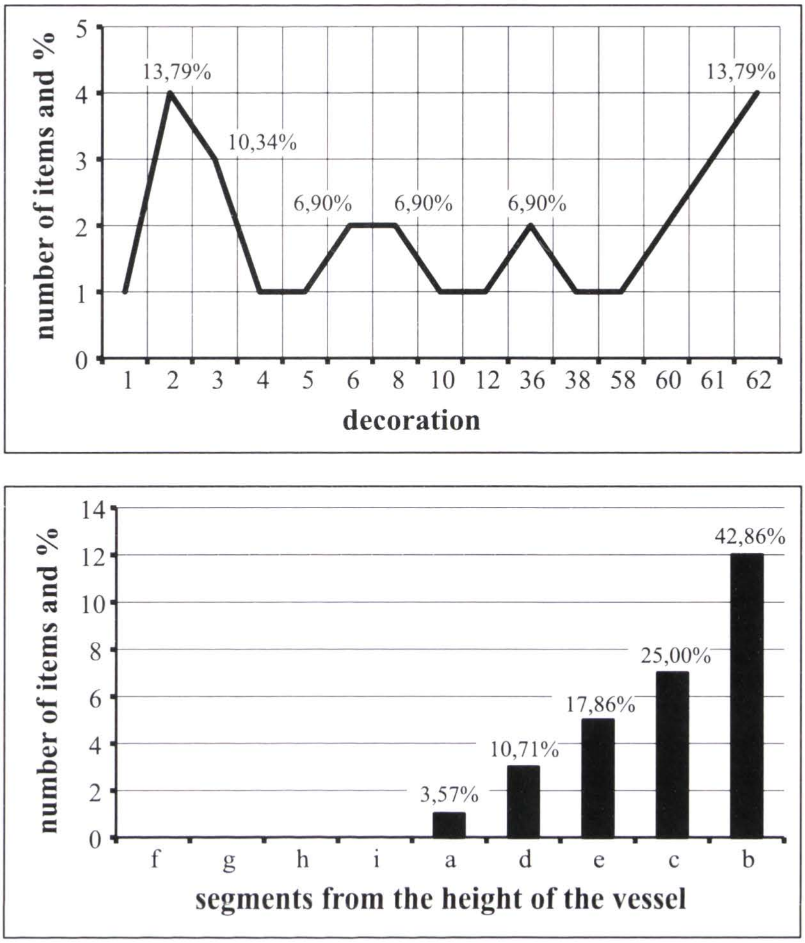

Fig. 22. Fast wheel-turned pottery from the settlement in Lazuri "Lubi tag" (Satu Mare County). Quantitative distribution of decoration types and their relation to pot segments

These observations also apply to the pottery from the settlement in Lazuri "Lubi tag", but one can also note the higher frequency of bundles consisting of straight lines, placed in succession and set apart, in many cases almost down to the base (Fig. 23/1–12). The predilection for this ornament has been noted in the case of pots made on the slow-turning potters' wheel found in the kiln from Kompolt "Kistéri-tanya" in North-East Hungary, in the relative proximity of the region of the Lower Someş, tentatively dated to the ninth century[69]. This is almost the exclusive decoration encountered on the pottery from the kiln in Sighișoara "Dealul viilor", an aspect that stresses the similarity with the fast wheel-thrown pottery from the settlement in Lazuri[70]. In its entirety, the fast wheel-thrown pottery lacks the decorative motifs included in group *D* (slow wheel-thrown pottery), such as comma-shaped impressions, circular impressions, oblong incisions, branch-shaped incisions, or comb-made oblique incisions (Fig. 4).

At the level of the entire researched material, the decoration of almost 2/3 of the items is placed in the segment starting right above the line of maximum diameter, namely in the upper third, and continuing almost up to the base of the neck. The pot parts that can be reconstructed to a larger proportion sometimes prove the extension of the decorated field in the segment located under the line of maximum diameter, without reaching the base part. Around 4% of the shards indicate elements of decoration down to almost the line of the base, suggesting that in the majority of such cases the decoration covered the entire height of the pots in question (Fig. 21 and Tab. 1). The situation of this type of pottery is almost the same in the settlement of Lazuri "Lubi tag". In ca. 60%

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[69] Takács, Vaday 2004, 18–20, 40–42, with references to the illustration.

[70] Spânu, Gáll 2016, 191 Pl. 1/14–15, 192 Pl. 2/13, 193 Pl. 3/19, 197 Pl. 7/70, 199 Pl. 9/5–8.

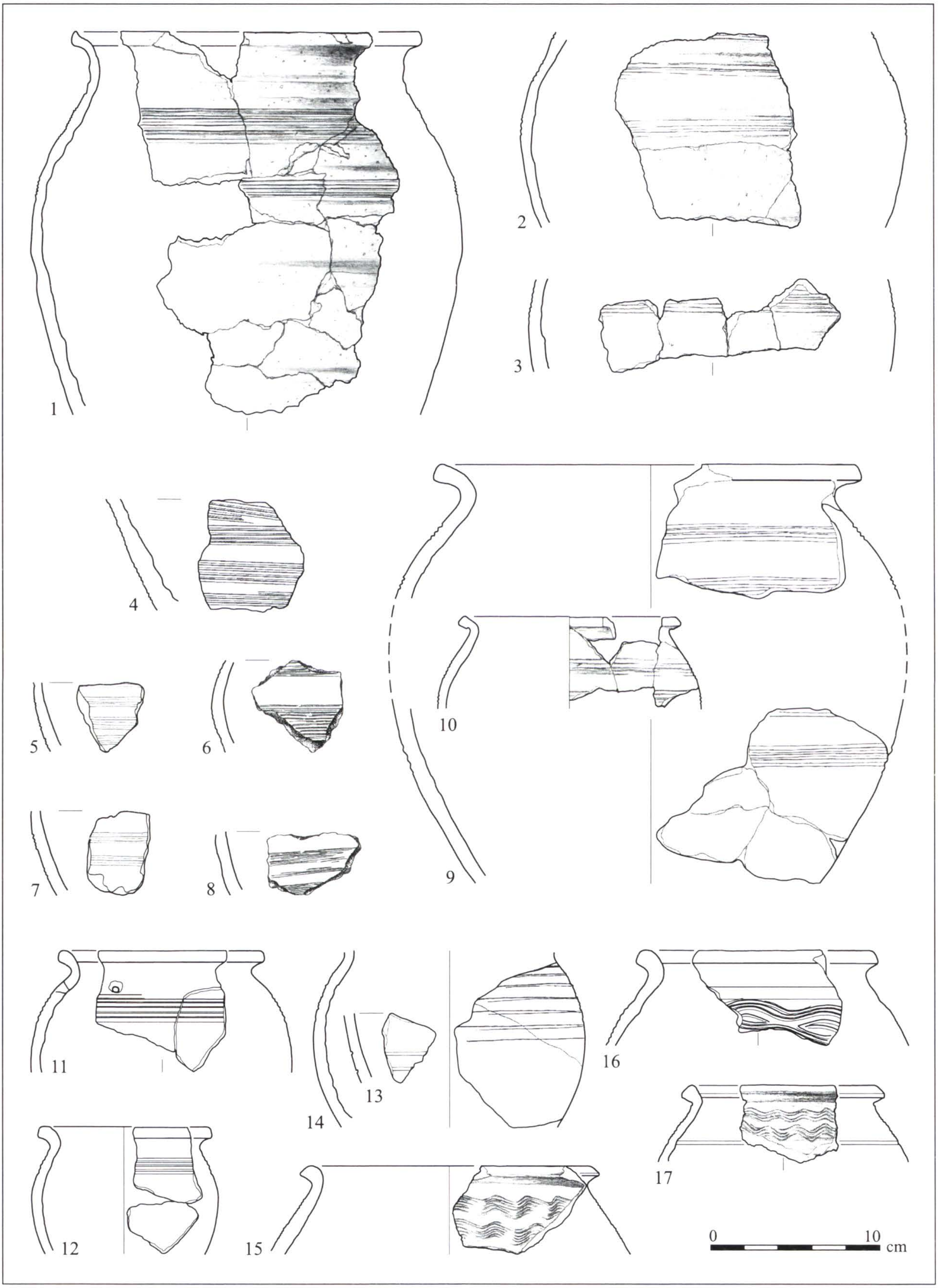
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
0
10
cm

Fig. 23. Early Medieval Settlement from Lazuri "Lubi tag". Examples for fast wheel-turned pottery decoration. Features 15/1995 (16), 24/1995 (4), 72/1995 (6, 8), 39/2001 (2–3, 10, 15, 17), 45/2001 (11, 12), and 54/2002 (1). Areas 10/1995 (9, 13), 11/1995 (14), and 43/2002 (5, 7). After Stanciu 2016

of the cases the decoration is present in the upper third of the pots, while on 25% of all decorated shards it extends even under the line of maximum diameter. A distinct aspect that stands out is the relatively high proportion (ca. 11%) of fragments decorated in the base part, a fact that proves the distribution of the decoration over the entire height of the pots (Fig. 22).

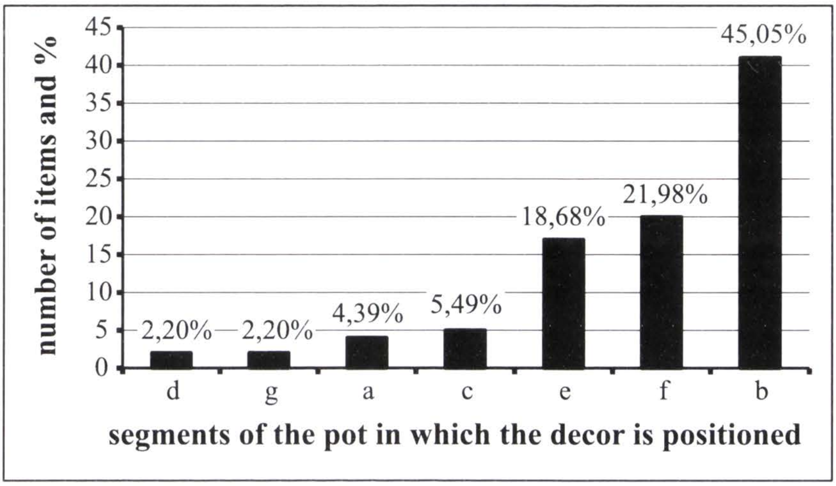

Fig. 24. Fast wheel-turned pottery (North-West Romania and the pottery kiln in Sighişoara "Dealul viilor"). Distribution of pot segments containing decoration

Conclusions. The conclusions are rather observations, at least some of them with temporary validity. This is due to the quantity and quality of the available documentary font from North-West Romania. From a chronological perspective, there are no alternative datings except for those often made based on pottery alone, so that the discussions and attempts at chronological identification making reference to wider intervals (rarely less than one century) are supported inside the circle of repeated references to parallels in the area or in closer or farther regions. Possible support points that might aid in the dating of local early medieval pottery, of some settlements, or of archaeological features with more certainty to the second half of the seventh century or the last two third of the century remain problematic. The interval followed a local horizon characterized by the almost exclusive presence of hand-made, undecorated clay pots (the so-called "Lazuri–Pişcolt Horizon", attributed to the oldest Slavic habitation in the north-western part of Romania). In the absence of a regional diagram, namely of terms for comparison, the dendrochronological analysis of a sample taken from a plank in the lower part of the wooden structure of a water well in Lazuri–Lubi tag, though well preserved, can only indicate for now the fact that the tree (an oak) it was obtained from had been felled during the eighth century or in the beginning of the ninth century[71].

Like everywhere else, decorative motifs and combinations of motifs, foremost the usual stripes consisting of straight or wavy horizontal lines made with a comb-like tool, appeared during the entire period under analysis. A more significant observation stems from comparing the frequency of decoration on fast wheel-thrown pottery and that of decoration on slow wheel-thrown pottery. As indicated by the pottery found in connection to the kiln in Sighişoara "Dealul viilor", besides the best represented material in the North-West, in the settlement from Lazuri "Lubi tag", the pottery modeled on the fast turning potters' wheel was decorated to a lower degree than the slow wheel-thrown pottery. As for the first category described according to technology and decoration, the material in Lazuri and Sighişoara indicates the predilection for successive horizontal stripes consisting of straight lines, rather often encountered also in the lower half of the pots, sometimes down to the base. This has also been noted in the case of some of the pottery found in connection to a pottery kiln in Kompolt–Kistéri-tanya, in North-East Hungary, not far from the area of the

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[71] Grynaeus, Tóth, Botár 2015; Stanciu 2016, 55–56.

SITES	DECORATION (Figs. 3–4, and 18)																																								
	1	2	3	4	5	6	7	8	9	10	12	14	15	16	17	18	19	22	24	26	27	29	32	34	35	36	38	39	40	48	58	60	61	62	63	64	65	66	67	68	69	70
Sighis.	•e		•e	•b		•d																																				
34			•f																																							
83	•a		•e			•b						•a		•f						•f						•b																
103	•b									•c			•b							•f														•f								
51	•e	•c	•b		•b	•b						•e					•b		•c		•f	•b	•b	•e	•b	•e		•b												•b		
75		•e											•c													•a		•e												•c		
105	•b		•b	•b		•b	•b		•f	•e		•b			•e	•f		•f	•f							•f		•f	•b	•f		•b	•b	•b		•f	•f	•b	•f	•b	•b	
67	•b	•f	•f	•d	•b	•e		•f	•b	•e	•b															•g	•e				•b		•g							•f		•b
20	•b			•b												•b	•e			•e			•b			•a									•b					•b		•e

Tab. 1. Fast wheel-turned pottery in North-West Romanian and in the pottery kiln from Sighişoara "Dealul viilor" (Sigh. = Sighişoara). Association of decorative motifs. The column on the left indicates the sites. 20: Bobota "Pe vale". 34: Carei "Staţia de epurare". 51: Cuceu "Valea Bochii". 67: Lazuri "Lubi tag". 75: Marca "Primăria nouă". 83: Nuşfalău "Ţigoiul lui Benedek". 103: Popeni "Pe pogor". 105: Porţ "La baraj"

Lower Someş, dated to the 9th century. In the absence of decisive arguments, the pottery found in connection to the kiln from Sighişoara has been dated to the 8th century[72] and the suggested dating for the slow wheel-thrown pottery from Lazuri is the second half of the 8th century and the first third or half of the subsequent century, not excluding an interval extending over the first half of the first two thirds of the 9th century[73].

It is possible that the almost entirely or even entirely exclusive presence of group *A* decoration (stripes of horizontal lines, straight or wavy, sometimes with distinct structures and various combinations of the elements) is an aspect specific to an earlier stage, namely the first half of the 8th century, possibly also the second half of the 7th century. This could be the dating of the settlements in Lăpuşel "Ciurgău" and Turulung "Vii", where hand-made pottery is also well represented. In the settlement of Zalău "Valea răchişorii/Pálvár", dated with more certainty to the 10th century, more likely its second half, the group under discussion is only present in association with motifs included in other groups; one should note the higher frequency of simple lines and of wide lines, straight or undulated (group *C*).

The superposition relations between some of the features of the settlement in Porţ "La baraj" and, possibly, the horizontal distribution of the decoration in the settlement from Aghireş "Sub păşune" suggest a trend that can also be noted in other regions, namely the higher frequency of simple limes, wider (straight or wavy), sometimes associated with the common stripes incised with the potters' comb. According to at least some authors, this change started to take place during the ninth century and has been connected to pottery modeling techniques.

The pottery found in features such as those in Zalău "Valea răchişorii/Pálvár" and most of the pottery discovered in the settlement from Sarasău "Zăpodie" can be dated in more certain terms to the period after the 9th century, i.e. to the 10th–11th centuries, and even slightly later in the case of the settlement from Sarasău. Group *A* elements can only be encountered sporadically or are completely missing, as the dominant decoration consisted of motifs part of group *C* (wide lines, only sometimes associated with comb-made stripes) and more rarely *D* (Fig. 4/49–59). Regarding the latter group, just like in the case of other areas, the circular "stamps" made with reed twigs, isolated, placed in rows or associated with horizontal lines (Fig. 4/50), are not clear-cut indicators of a later stage. In the material known so far from North-West Romania, there are no pots with burnished decoration, as these are usually made of fine fabric.

Pit 113a from the settlement in Lazuri "Lubi tag" stands out through the highest quantity of slow wheel-thrown pottery. This is the only feature known so far in North-West Romania where decorative motifs from all four groups are associated, besides those marks in relief placed on the bottoms of some of the pots (Fig. 11/1–35). Just like on the wheel-thrown pottery, horizontal stripes consisting of straight lines are well represented, covering almost the entire body of some of the pots. There is a single occurrence of "comma-shaped" impressions, a decorative motif mainly used during the 10th and 11th centuries inside the Carpathian Basin, including Transylvania (Fig. 11/3). This ornament seems to have first appeared in the end of the 9th century or at the turn of the 9th and 10th centuries, possibly, indifferent of the date, initially on the Lower Danube and in the Byzantine environment. Relatively few structures have been investigated so far in the settlement from Lazuri and those that have been researched seem to have been grouped in several units, over a rather large area. One should add the observation that no relations of superposition have been noted[74]. Besides feature 113a one must also mention a very possible lead weight for scales (an isolated discovery), with parallels between the 10th century and the first half of the 12th century (Fig. 11/36a–b)[75]. One cannot entirely exclude the possibility that a late habitation stage existed in the early medieval settlement of Lazuri, that can be dated to the 10th century or to the 10th–11th centuries, but no extra arguments are available as yet. These could be the traces of a sporadic and brief later habitation or remains of another settlement mainly in use sometime beyond the interval under analysis here. Still, the inventory of pit 113a is no different from the material found inside the settlement, except for the presence of the decorative motif under discussion and of the relief marks on the bottoms of two pots which could also be dated to the 9th century. One might even envisage the possibility that this comma-shaped decorative motif appeared earlier in some regions, namely before the final part of the 9th century.

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[72] Spânu, Gáll 2016, 185.

[73] Stanciu 2016, especially p. 260–261. Benchmarks also supported by two bronze earrings.

Eventually, the observations above are but suppositions or even speculations, at least as long as the settlement in Lazuri is not investigated to a higher degree. According to the knowledge gained so far, one observation is more certain, i.e. the trend that the decoration of early medieval pottery from the north-western part of Romania matches a trend that has already been hypothesized for both neighboring and more distant regions. One can currently make no finer observations regarding the possible existence of chronological delays. Similarly, no workshops or potters that supported the production and distribution of pottery on the level of more restricted areas can be identified in North-West Romania based on the decoration of pots. The situation might be different in the case of a micro-region based along River Târnava Mare in central-eastern Transylvania, centered on the settlement in Albeşti–Sighişoara, where a higher frequency of the discussed "Fischgrätmuster" has been observed.

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[74] Stanciu 2016, 23 Fig. 7, 25–26.

[75] Stanciu 2016, 255, 266 „ deposit" 1/1993, 398 Pl. I/1a–b.

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Appendix 1. Distribution of decorative variants of slow wheel-thrown pottery in the early medieval archaeological features from North-West Romania. Values *a–h* refer to those pot segments on which the decoration is distributed, according to Fig. 13. Each decorative motif is recorded only once in each feature, even if it is depicted several times. The unrecorded motifs are depicted on materials not found inside features. The sites are marked by the identification numbers in Appendix 1. 2: Aghireş “Sub păşune”. 7: Badon “La Răstignire”. 20: Bobota “Pe vale”. 34: Carei “Staţia de epurare”. 42: Cheud “Sub hij”. 51: Cuceu “Valea Bochii”. 52: Culciu Mare “Boghilaz”. 67: Lazuri “Lubi tag”. 69: Lăpuşel “Ciurgău”. 75: Marca “Primăria nouă”. 79: Mirşid “Pe luncă”. 83: Nuşfalău “Ţigoiul lui Benedek”. 103: Popeni “Pe pogor”. 105: Porţ “La baraj”. 116: Sarasău “Zăpodie”. 127: Turulung “Vii-Hegyalja”. 138: Zalău “Bul. Mihai Viteazul nr. 104–106”. 140: Zalău “Valea răchişorii/Pálvár”

SITES	FEATURES	DECORATION (Fig. 127–130)																																																										
		A																												B						C														D										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
105	C39 (1)	•c								•c																																																		
2	32’08 (2)					•c								•e											•b																																			
2	63’08 (3)	•a													•c																																													
2	65’08 (4)					•b			•b																•e																																			
2	100’08 (5)								•c																•c																																			
2	105’09 (6)													•c											•c																																			
2	59’08 (7)	•a					•b																																																					
2	103’09 (8)																		•b																																									
2	107’09 (9)																										•b																																	
105	C29 (10)	•b					•b																																																					
20	L.5’03 (11)					•b																			•c																																			
20	C.2’03 (12)	•a						•b		•e																																																		
20	G.1’03 (13)		•e				•b		•c		•f								•b																																									
34	Cx. ’92 (14)	•b				•b	•e								•a	•b	•e		•b						•e		•f																																	
51	L.2/’99 (15)	•a	•b	•f	•a		•b					•e		•b											•b		•f																																	
67	Dep. 1/’93 (16)																								•e			•f																																
67	72/’95 (17)	•e					•a																				•c																																	
67	39/’01 (18)	•b							•c										•b																																									
69	L. 2 (19)																	•e							•e																																			
69	G. 12 (20)	•a					•a							•e									•e																																					
69	L. 3 (21)				•e		•b				•b		•b,c		•b								•f		•e		•e																																	
69	G. 10 (22)	•a														•b									•e																																			
69	G. 9 (23)					•b																					•f																																	
69	G. 16 (24)			•f																							•f																																	
69	G. 17 (25)						•b				•e				•b																																													
69	G. 33 (26)	•a												•b	•b												•b																																	
75	C. 7/’06 (27)	•a					•b							•e						•b																																								
83	L. 1/’01 (28)	•a					•h				•f			•b					•b						•c																																			
7	L. ’99 (29)	•b		•b,c	•f		•b				•b				•b,c				•b								•f																																	
103	L. 1/’78 (30)				•b										•b										•b																																			
105	C. 21 (31)								•e										•b						•b																																			
127	2 (32)	•a												•b																																														
105	C. 22 (33)	•c																									•b																																	
2	104/’09 (34)						•a														•f						•f			•b																														
2	109/’09 (35)					•a																									•b																													
20	LX/’03 (36)	•b	•c								•c			•b																•f,h																														
20	C.1/’03 (37)	•c				•c	•e	•b						•b																				•f																										
51	L.2/’78 (38)	•a		•b	•b		•a			•e				•e		•e			•e													•e	•e		•e																									
67	15/’95 (39)			•f							•e				•e	•f			•b						•e		•c				•b																													

SITES	FEATURES	DECORATION (Fig. 127–130)																																																								
		A																												B						C														D										
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69	L. 1 (40)	•e									•f		•e	•e										•f			•f						•f																											
79	L. 4/2000 (41)						•b				•f								•b									•e				•f																												
103	G. 1/'78 (42)						•a	•e							•b										•e		•f								•e																									
103	B/'99 (43)	•e			•a		•a	•b			•e		•b	•b	•b					•e				•f	•e			•e		•b	•e																													
103	L. 7/'99 (44)	•a				•a					•e			•b																•a																														
105	C. 34 (45)	•b												•a					•b						•b								•e																											
138	G. A/'98 (46)										•b								•b											•b																														
2	111/'09 (47)		•e					•a	•c						•a																•e				•e										•c															
2	112/'09 (48)	b•,c							b•,c	•g										b•,c		•c																							•c															
2	120/'09 (49)		•e			•a	•a	•c	•e																					•e		•c	•f						•e				•c		•c															
51	L.1/'99 (50)	•e	•b		•f		•b		•b	•f			•a		•e	•e		•f	•e											•e		•f							•e	•e																				
51	L.3/'99 (51)	•e	•b		•b	•h	•b	•b			•b	•c	•b	•e	•e				•e						•e						•b							•b		•b				•b																
51	L.4/'99 (52)	•b	•b		•a		•h								•b																•b						•e				•a																			
67	233/'02 (53)	•c					•i												•a												•e														•e															

SITES	FEATURES	DECORATION (Figs. 3–4)																																																									
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75	C. 4/'06 (54)						•a												•b																a•,c		•b		•c																							
105	C. 1 (55)	•b	•e																•b						•e										•b		b•,c		b•,c		•b																					
105	C. 17 (56)	•e	b•,c			•b	•b	•e						•b					•b						•e								•b			•a	•e		•c	b•,c							•e															
105	C. 20 (57)	•b			•e																											b•,c					•a	•b	•b																							
105	C. 42 (58)													•b																•b									•c	•c																						
2	39/'08 (59)	•b																										•e										•b					•e	•e																		
2	46/'08 (60)	•e		•f																																						•e						•e														
2	59/'08 (61)	•a					•a																																•a																							
2	121/'09 (62)	•b																																							•c																			
2	113/'09 (63)					•a			•b										•b																				•b						•f															
2	115/'09 (64)																										•b										•b																							
2	56/'08 (65)																										•b												•b			•b																		
20	L.3/'03 (66)	•b	•b			b•,h		•b							•e				•b	•b																	•b																							
42	1/'09 (67)	•a					•b								•b				•b																	•b																								
51	G.1/'99 (68)			•a																																					•a				•f															
52	locuinţă (69)					•a																					•e										•d			•f		•a		•f																
67	40/'01 (70)	b•,c				•a																															•e		•b																					
67	45/'01 (71)						•b		•b					•b					•c						•b													•b						b•,c																
69	G. 3 (72)	•b												•b																						•b																								
83	Cx. '78 (73)		•e				•b							•a		b•,c			•b								•f																		b•,c															
103	A/'99 (74)							•b			•e								•b																						•e																			
105	C. 3 (75)	•e	•b		•b		•b				•b				•e	•e			•b								•b										•b	•a							•b															
105	C. 5 (76)	•b																	•e																												b•,c													
105	C. 10 (77)					b•,h								•e											•e														•b								•f													
105	C. 12 (78)	•b												•c																									•c																					
105	C. 23 (79)	•b																	b•,c						•b												•b		•b																					

SITES	FEATURES	DECORATION (Figs. 3–4)																											
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138	L1/’76 (80)	•b			•b																								
138	L1/’98 (81)																•b												
138	C1/’98 (82)	•b			•b		•b	•b			•b,c								•b								•b,c		
138	L7/’98 (83)		•b				•b				•e								•b										
140	L1/’01 (84)								•b																				
2	97/’08 (85)																				•f								
67	Sf. 10/’95 (86)	•c		•b,c			•a			•c	•b								•b										
67	113a’97 (87)			•g							•f			•b					•b								•f		
103	L. 6/’99 (88)																•b												
2	31/’08 (89)																												
116	L. 13 (90)				•b																								
2	55/’08 (91)													•c									•b						
105	C14 (92)	•b												•b															
105	C16 (93)																												
51	G.2/’99 (94)																												
140	L2/’01 (95)																												
140	atelier/’02 (96)																												
105	C4 (97)																												
2	36/’08 (98)																												
105	C38 (99)																												
105	C44 (100)																												
105	C18 (101)																												
20	G6/’03 (102)																												

SITES	FEATURES	B						C														D										
		29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
138	L1/’76 (80)										•b																					
138	L1/’98 (81)										•b																					
138	C1/’98 (82)								•b		•b																					
138	L7/’98 (83)									•b																						
140	L1/’01 (84)								•f		•f		•a					•f														
2	97/’08 (85)																													•e		
67	Sf. 10/’95 (86)						•b			•b	•c														•c							
67	113a’97 (87)									•c	•f	•f																			•e	•e
103	L. 6/’99 (88)							•a																•b								
2	31/’08 (89)	•a																														
116	L. 13 (90)							•a	•e	•b	•e	•b															•b	•b				
2	55/’08 (91)	•e								•a																						
105	C14 (92)										•b,c																					
105	C16 (93)	•b							•b																							
51	G.2/’99 (94)								•a		•a																					
140	L2/’01 (95)							•e			•b																					
140	atelier/’02 (96)								•b	•e	•b,c																					
105	C4 (97)								•b																							
2	36/’08 (98)							•c																								
105	C38 (99)									•a																						
105	C44 (100)									•b	•c																					
105	C18 (101)								•a		•c																					
20	G6/’03 (102)																					•e										

The Avar Presence in Transylvania Chronology. Motivation. Territorial boundaries*

Călin Cosma

Abstract: *The presence of Avar warriors in Transylvania during the 7th–8th centuries is a reality that cannot be contested, as it is proven by the cemeteries and graves that belong, beyond doubt, to warriors of Avar origin. The first Avar incursions in the Transylvanian Plateau took place after 630 and aimed at occupying/conquering the salt-rich areas in the center of Transylvania. This was only possible after they established their direct control over the Gepid communities in the center of the Transylvanian Plateau. I do not believe we can speak of a conquest of Transylvania, but rather of an act of taking control over a territory that the Avars were interested in due to its salt resources. They did not decimate the Gepid communities, but lived alongside them and used them to extract salt. According to the archaeological data that can be attributed with certainty to the Avar warriors (cemeteries and graves), one can note the fact that the entrance of the Avars in the Transylvanian Plateau was not a large-scale phenomenon and the territory they actually dominated was much smaller than some specialistshave estimated. This territory was restricted to the area between Câmpia Turzii and Teiuș, where the Mureș turns south, on both sides of the river. Current data do not allow one to form a general picture of the way in which the Avar domination in Transylvania ended. The history of the central province of Romania during the first half of the 9th century still holds many uncertainties that only future archaeological researches might decipher. Based on everything presented so far, I believe one cannot speak at all of an "Avarization" of Transylvania, but rather of a "Slavization" of the region, as Slavic settlements and cemeteries from the 7th–8th/9th centuries have been documented throughout the territory of the Transylvanian Plateau. The Avars made a place for themselves in this Slavic world, in a relatively small geographic area.*

Keywords: *Transylvania, Avars, cemeteries, artifacts, chronology.*

Introductory note

From a historical perspective, the end of the Gepid state in 567/568 triggered the formation of a new power center in Pannonia coordinated by the Avars, a political situation of special significance to the history of South-Eastern Central Europe. Some historians believe that the year 568 marks the beginning of the Early Middle Ages in certain territories bordering the Danube[1]. During the 7th and 8th centuries, through a series of warlike actions, the Avar khagans aimed at expanding the borders of their Empire, while through other actions they only wished to control certain areas in the center and south-eastern parts of Europe. Transylvania was also envisaged by this expansionist policy.

The Transylvanian Depression, surrounded by the Carpathian Mountains, is strikingly different from the other territories of West Romania[2]. The Transylvanian Plateau was and still is connected to the areas beyond the Eastern Carpathians through the communication routes located both along the main rivers that flow westwards and the existing passes of the Western Carpathians[3]. Ever since Antiquity, the history of this territory differed from that of the other Romanian provinces in West Romania, including the period of the 7th and 8th centuries[4]. For this good reason the present research is limited to the Transylvanian Plateau alone.

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* English translation: Ana Maria Gruia.

[1] Rusu 1977, 194; Pohl 1988, 52–57; Zábojník 2004, 132; Curta 2006, 178.

[2] Pop 2003, 17–20.

[3] Pop 2003, 19.

From a historiographical perspective, a series of data that contradict the archaeological realities in the Transylvanian Plateau still persist in relation to the history of Transylvania during the 7th and 8th centuries. I believe that a new analysis of the older archaeological evidence is in order, besides the discussion of the series of new discoveries.

The present study aims at answering the following questions: 1. When did the Avars enter Transylvania and how long did it take for them to occupy the envisaged geographic area?; 2. Why did the Avars enter Transylvania?; 3. How large was the territory they occupied in Transylvania?

Chronology. When did the Avars enter Transylvania and how long did it take for them to occupy the envisaged geographic area? The Avar discoveries made in the Transylvanian Plateau can be structured according to two groups. The first includes Avar discoveries from Late Germanic cemeteries[5]. The second group includes Avar cemeteries without Gepid graves and a series of metal items that are stray finds, lacking an archaeological context, but clearly Avar in nature[6].

In the Late Germanic cemeteries of Transylvania, the funerary complexes belonging to the Avars have been identified both based on the funerary inventories specific to Avar warriors (mainly stirrups and bids or belt fittings) and on the funerary habit of burying entire horses or parts of horse skeletons besides the human bodies in individual or shared graves[7], a funerary practice attested in the Avar environment in the Carpathian Basin[8].

The list of Gepid necropolises with horse graves belonging to the Avar environment in Transylvania is not very long. Such cemeteries include few funerary complexes with horses. Two graves that were discovered in Bistrița contained one horse bone each, but the inventories did not allow archaeologists to date them or to attribute them to any ethnic group[9]. In Fântânele specialists discovered two such graves, but one is uncertain (possibly a cow's grave). These complexes cannot be dated or attributed with certainty[10]. A single horse grave, lacking an inventory, was discovered in the cemetery in Valea Largă[11]. The three cemeteries presented above are to be excluded from the list of Gepid necropolises with Avar graves. The presence of horse bones in the three cemeteries can have various explanations, including some related to the phenomenon of acculturation.

The discussion thus focuses on the cemetery in Bratei/Cimitirul nr. 3 (hence forth Bratei 3, 27 graves of and with horses)[12], followed in descending order by the cemeteries in Band (14 graves of and with horses)[13], Noșlac (5 horse graves)[14], Șpălnaca (8 Avar graves, among which 2 also included horses)[15] and Unirea 2/Veresmort (one grave with bones from a horse's skeleton)[16]. K Horedt has dated the Band-Noșlac cemeteries (that form group IV of Germanic row cemeteries in Transylvania) to the first half of the 7th century, possibly continuing during the subsequent two decades[17]. I. Bóna and R. Harhoiu suggest that these cemeteries should be dated starting with the last quarter of the 6th century and to the first half of the 7th century[18]. K. Horedt includes the Avar cemeteries and graves in the Middle Avar Period (660/670–720)[19].

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[4] Cosma 2017, 13–14.

[5] Kovács 1913, 389; Dobos 2010–2011, 377–403.

[6] Cosma 2017.

[7] Kovács 1913, 389; Dobos 2010–2011, 377–403.

[8] Čilinská 1961, 325–346; Kiss 1963, 153–162; Garam 1987b, 65–123; Némethi, Klima 1987–1989, 173–176; Čilinská 1990, 135–146; Čilinská 1991, 187–212; Bóna 1990, 113–122; Sós, Salamon 1995,111; Balogh 2009, 9–42; Bede 2012, 41–47; Bede 2014, 211–225; Zábojník 2015, 277–291; Bede 2017, 1–6.

[9] Gaiu 1992, 118, M. 32 and 35, Fig. 3/1

[10] Dobos, Opreanu 2012, M. 15, 25, 32–33, 62, 65, 68, 70, Pls. 4, 41/1–2.

[11] Hica 1974, 519.

[12] Bârzu 2010, 171–271.

[13] Kovács 1913, 265–389.

[14] M. Rusu's archive; Rusu 1962, 270, 274, 277; Rusu 1964, 36–37, 42; Dobos 2015, 59–60, 70–71; Cosma 2017, 64–65, Pl. 26.

[15] Cosma 2018c, 157–175.

[16] Rustoiu/Ciută 2015, 107–127.

In the first chronological group one should include the Avar graves in the Gepid cemeteries from Band and Bratei 3, the grave in Unirea 2/Veresmort, the Avar cemetery in Aiud[20] and the Avar finds discovered in Stremț[21] and Târnăveni[22] that were most likely part of graves. Grave no. 44 from Band, belonging to the horizon of burials with horses, contained the end of a whip handle. In the area between the Tisa and the Danube, such artifacts feature in Avar graves dalegated to the chronological horizon dated after 624[23].

In Bratei 3 and Aiud archaeologists discovered round stirrups with the eyefor the stirrup leather loop separated from the body of the stirrup. The eye is in the shape of a vertical rectangle. The fitting hole of the stirrup leather eye is rectangular (Fig. 1). One often encounters this type of stirrup in the Avar environment of the Carpathian Basin until the middle of the 7th century[24]. The stirrups might have supported the dating of the two cemeteries during the first decades of the 7th century, but they were discovered associated with globular stirrups with the leather eye made of the same metal bar, obtained through bending the upper part of the bar (Fig. 2). Artifacts of the latter stirrup type are encountered in the Carpathian Basin in contexts dated throughout the 7th century[25]. The archaeological complexes containing both types of stirrups are dated to a period subsequent to the beginning of the 7th century[26]. A bell-shaped stirrup with flat sole and leather eye separated from the body was discovered in the cemetery of Bratei 3 (Fig. 3). The artifact is similar to stirrups type III Čilinská that started to be employed after the middle of the 7th century[27]. Globular stirrups with the leather eye made of the same bar, through the bending of the upper part, were discovered among the artifacts found in Aiud, Bratei 3, the grave in Unirea 2/Veresmort, and in Stremț and Târnăveni (Fig. 2). I have already mentioned the fact that stirrups of this type are dated throughout the 7th century and thus only support wide datings. All of the artifacts in the grave from Unirea 2/Veresmort have analogies among items dated to the 7th century. The funerary complex was thus dated between 630 and 670[28]. The grave can be connected to the late period of use of the Germanic necropolis in Veresmort[29].

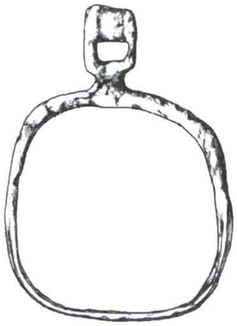
Fig. 1. Stirrup from Aiud

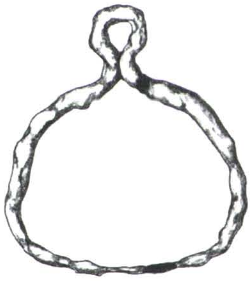
Fig. 2. Stirrup from Bratei 3

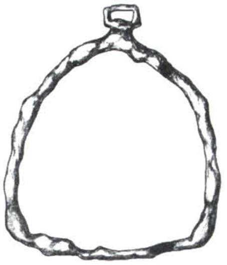
Fig. 3. Stirrup from Bratei 3

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[17] Horedt 1977, 261, 263–264.
[18] Bóna 1979, 26–50; Harhoiu1999–2001, 122–132.
[19] Horedt 1956, 391–404; Horedt 1958, 87–88; Horedt 1986, 66–72.
[20] Cosma 2017, 45–46, Pl. 1–2
[21] Cosma 2017, 75, Pl. 39/1–2.
[22] Cosma 2017, 79, Pl. 44/B.1–2
[23] Balogh 2016, 404.
[24] Čilinská 1966, 190, Tip I; Curta 2008, 304.
[25] Čilinská 1966, 190, Tip II; Curta 2008, 305.
[26] Čilinská 1966, 190, Tip.II; Curta 2008, 305.
[27] Čilinská 1966, 190, Tip III/3; Garam 1987b, 196.
[28] Rustoiu, Ciută 2015, 107–127; for the dating of the backsword see Cosma 2018a, 35–36, Fig. 6/III.1a.
[29] Roska 1934, 123–130.

As for the necropolises in Band and Bratei 3, existing publications mention the discovery of Avar-type graves on the margins of cemeteries with Germanic graves[30]. The graves with Avar items have been dated to the late phase of the cemeteries in question the end of which specialists have set to the middle of the 7th century[31] or even two decades later[32]. In this case the Avar-type graves discovered on the fringes of the cemeteries in Band and Bratei 3 cannot be dated earlier than the year 630. The cemetery in Aiud is also dated after 630, just like the possible funerary complexes in Stremț and Târnăveni.

All of the above-mentioned discoveries are to be included in the same cultural and chronological group. One can thus speak of a first Avar incursion in Transylvania that took place, at the earliest, starting with 630. They came as a unitary group of populations, a fact also supported by their practice of the ritual burial of horses in separate pits or the depositionof horse skeleton parts in human graves, attested both in Band and Bratei 3[33]. The cemeteries where the first Avars that entered Transylvania buried their dead went out of use around 670/680 and not in 700.

A similar situation, regarding the presence of Avar graves in older or more recent cemeteries, such as in Aiud, Band, Bratei 3, Unirea 2/Veresmort, has also been observed in the Tisa-Danube interfluve, where the funerary complexes have been dated after 624[34]. Such graves have been attributed to the arrival of new population groups in the territory between the Tisa and the Danube. It is very possible that some of those tribes entered Transylvania as well after the year 630. A series of artifacts typologically different than those from the Avar group presented above have been discovered in Transylvania. The onset of the new objects is linked to the introduction of new funerary customs related to the manner in which horses were buried, in their turn different than those already discussed.

This new cultural group is attested by the Avar graves from the Germanic cemeteries in Noșlac and Șpălnaca, the biritual cemetery in Bratei 2, as well as the Avar cemeteries in Aiudul de Sus, Bratei 2, Câmpia Turzii, Cicău, Gâmbaș, Geoagiu de Sus, Heria, Lopadea Nouă, Măgina and Teiuș[35]. In all these cemeteries, archaeologists only discovered stirrups with rectangular or slightly rounded body and the upper part strongly arched. Their soles are wide, bent inwards and pulled upwards. The rings of the stirrup leathers are separated from the upper part of the stirrup and are square in shape (Fig. 4). Such stirrups first appeared in the Carpathian Basin in the end of the Middle Avar Period. As examples one can mention the few stirrups discovered in Devínska Nová Ves[36]. Still, one encounters the most numerous items especially during the 8th century, both in the Carpathian Basin[37] and on the territory of present-day Poland[38]. Approximately identical in shape, the artifacts of this type are also attested during the first half of the 9th century[39].

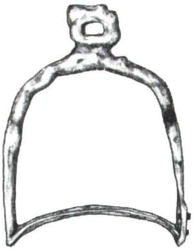
Fig. 4. Stirrup from Șpălnaca.

These stirrups provide a terminus *post quem* for the dating of the Avar graves and cemeteries mentioned above. The chronology provided by this type of stirrup is completed by a series of artifacts that are good indicators for dating, such as earrings, phalerae and belt buckle prongs that are associated with stirrups in graves. In Cicău, Gâmbaș and Teiuș specialists discovered lunular earrings[40] that started to be used in the middle of the 7th century in the Carpathian Basin[41]. Taking into consideration only the phalerae[42] discovered in Cicău, the grave could only be dated to the 8th century. But no cast bronze item was discovered in Cicău and this prevents the dating of the necropolis after the year 720. The dating of the necropolis in Gâmbaș after 650 is supported by the lunular earrings discovered in two of the graves part of this cemetery. In Teiuș, researches have led to the discovery of cast bronze buckle prongs that date the cemetery until around 720. The cast bronze appliques and belt buckle prongs support the dating of the cemeteries in Bratei 2, Câmpia Turzii and Lopadea Nouă[43] to the 8th century alone. In Cicău, Noșlac and Șpălnaca archaeologists found graves in which the horse had been placed entire beside the human corpse. This funerary practice differs from the one according to which horses were placed in individual graves, such as those discovered in the cemeteries in Band and Bratei 3[44]. According to those mentioned above, one can state that a new group of Avar populations entered Transylvania sometime after the middle of the 7th century (Tab. 1).

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[30] Kovács 1913, 368; Horedt 1977, 261, 263–264; Bârzu 2010, 149–160.

[31] Bona 1979, 16–50; Harhoiu 1999–2001, 122–132.

[32] Horedt 1977, 261, 263–264.

[33] Cosma 2018b.

[34] Balogh 2016, 403–405

[35] For all of the mentioned settlements, see Cosma 2017.

[36] Eisner 1952, M. 79, 24–26, Pl. 31/12, M. 524, 119–120, Pl. 71/9.

[37] See for example: Čilinská 1966, 190–191, Tip IV; Kiss 1977, M. 184, 56, 59, Pl. XXII/13; Garam 1987a, 75, 85, 88; Trugly 1987, 289; Garam 1995, 358, Fig. 215, 6/565, 7/1146; Juhász 1995, M. L, 35–36, 66, Pl. XV/2; Kiss 1996, 243, Fig. 139; Kiss 2001, Tei! II.

[38] Zoll-Adamikowa 1992, 310, Fig. 3/e–f; Poleski 1997, 19, Fig. 3/14.

[39] Ruttkay 1976, type I, variant 2, 353–336, Fig. 74/I.2.

Graves and Avar cemeteries	Chronology		
	630 – 670	650/670 – 710/720	720 – 800
1. Aiud	●		
2. Band	●		
3. Bratei 3	●		
4. Stremț	●		
5. Târnăveni	●		
6. Unirea 2	●		
7. Cicău		●	
8. Gâmbaș		●	
9. Teiuș		●	
10. Aiudul de Sus		●	
11. Geoagiu de Sus		●	
12. Heria		●	
13. Măgina		●	
14. Noșlac		●	
15. Șpălnaca		●	
16. Bratei 2			●
17. Câmpia Turzii			●
18. Lopadea Nouă			●

Tab. 1. Avar graves and cemeteries from Transylvania. Chronology

The Avar tribes arrived in the Transylvanian Plateau in two successive stages. The first is to be dated after 630. The second started after 650, most likely after 670. Based on existing data, one cannot decide if the discoveries that are only dated to the 8th century attest a new massive arrival of the Avar tribes in Transylvania. One must take into account the fact that the last great arrivals of populations from the Eurasian steppes into the Carpathian Basin took place during the last decades of the 7th century and that the Avars from Pannonia started to use bronze cast items also in the end of the 7th century[45].

The two groups of Avar tribes probably met sometime around the 670s[46]. I believe that once arrived in Transylvania after 630 the Avars never left the province. Those buried in the Avar cemeteries dated after 650/670 were part of a new generation of Avar warriors and civilians, such as those buried in Sâncrai (Alba County), who brought into the Transylvanian Plateau the changes that took place in the Avar world from the Pannonian Plain in the field of weaponry, horse tack and dress accessories. I also believe it is not logical to envisage a first Avar invasion of Transylvania in the third decade of the 7th century aimed at destroying the Gepid center followed by an Avar retreat in Pannonia and the start of new campaigns to conquer Transylvania after less than 10 years.

The entry of the Avars in Transylvania after 624/630 can be connected to a series of military events that took place in the Carpathian Basin between 568 and 624. After the Avars conquered

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[40] For the types of earrings from Transylvania, see Cosma 2017.

[41] Cosma, Bologh, Oargă 2017, 198–200, with bibliography.

[42] For the dating of the phalerae during the Avar Period: Garam 1987a, 85–93; Garam 1987b, 197; Bálint 1989, 163, Fig. 74, 4; Profantová 1992, 633–635; Zábojník 2004, 138.

[43] For the types of items see Cosma 2017.

[44] Cosma 2018b.

[45] For these issues see, for example:Comșa 1987, 219–230; Garam 1987b, 196–197; Horedt 1987, 14–15, 19–20; Pohl 1988, 268–282; Vida 2003, 306–307; Szőke 2003, 308–310.

[46] Specialists have wondered since the 1950s if there was a relation of continuity between the two presumed stages of arrival of the Avars in the Transylvanian Plateau (Horedt 1956, 403 and Horedt 1958, 87–89).

Pannonia, their plunder incursions mainly envisaged western and south-western Europe and some Avar parties reached North Croatia. The defeat of the Avars under the walls of Constantinople in 626 triggered a series of political, military, social, economic and other convulsions in the entire Avar Empire[47]. The sources record the fact that most of the Avar heavy cavalry, consisting of warriors using sabers, was decimated under the walls of Constantinople[48]. Backswords and swords started to be widely used subsequently[49]. In this context I mention the fact that no saber used by the Avars up to around 630 was discovered in Transylvania[50].

The interest of the Avar khagans in Transylvania grew substantially after the year 626. On the one hand, after 626 the entire territory of the Avar Empire experienced centrifuge movements[51]. It is possible that the leaders of the communities from the Transylvanian Plateau (Gepids or Slavs) also took part in the revolts against the political structure of the Avar Khaganate. On the other hand, after the 626 defeat the Avar communities became increasingly sedentary, even if cattle farming remained their main economic activity[52]. Certain decisions regarding the recovery of the Khaganate were required. Measures were taken to stop the centrifuge movements in the territory through military actions and to rectify the empire economically. From a political and military perspective, the Avar khagans managed to stop the revolts and regain control[53]. From an economical perspective, among the measures envisaged by the Avar khagans one can include a new impetus in the field of salt extraction from Transylvania and the trading of this product in Western Europe. The leaders of the Avar Empire wished to institute a direct control over the salt reserves in the Transylvanian Plateau – the issue shall be discussed in the subsequent chapter.

The knowledge of the culture of the Avar environment during the 9th century still raises numerous problems, even for the area of maximum development of the material culture of the Khaganate during its existence as a political entity. For the western areas of the former Avar Khaganate, under the direct control of the Carolingian Empire (the territory on the right side of the Danube, the Zalavár area), the more resent researches of Hungarian historiography state that traces of the Avars which became vassals of the Franks can be found among graves with jewelry items specific to the first, part of both the male and female costume[54]. The performed analyses have supported the suggestion that the middle of the 9th century be considered the end phase of the Avar Period[55].

The end of Avar rule in Transylvania is a topic that cannot be yet settled in clear terms. One does not know exactly how long the Avar cemeteries mentioned above were in use during the 8th century. For now, we can only state for certain that in the Transylvanian Plateau there is no archaeological evidence that can be dated to the first decades of the 9th century and that attests the Avar continuity in the geographic area under discussion by comparison with the already mentioned area located on the right side of the Danube. The continuity of the Avars during the 9th century in the center of Romania is a phenomenon that is yet to be supported through actual archaeological evidence.

Motivation. Why did the Avars enter Transylvania? Existing historiography contains a series of hypotheses regarding the reasons behind the extension of Avar influence over the eastern areas of the Carpathian Basin as well. The most significant such hypotheses are the following: the Avars intended to destroy the Gepid power east of the Tisa, including the Transylvanian Plateau, as the latter were still active in this area after 567/568; the Avar khagans wished to rule the areas of Transylvania that were rich in salt and gold and to monitor trade along the Mureş Valley between the Transylvanian Plateau and Central Europe; the Avars intended to rule the pasture areas in the Transylvanian Plateau (Târnavelor and Someşului valleys), in order to use them for their own animal herds[56].

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[47] See for example: Erdély Története 1986, 169; Simon 1993, 171–172, 176; Daim 2003, 481, 483–484; Balogh 2017, 405.

[48] Simon 1993, 171–172, 176.

[49] Garam 1991, 160; Simon 1993, 176.

[50] Cosma 2018a, 27–48.

[51] Erdély Története 1986, 169; Daim 2003, 481–482.

[52] Erdély Története 1986, 169,171; Daim 2003, 481, 483–486.

[53] Erdély Története 1986, 169; Daim 2003, 481–482.

[54] See for example: Szőke 1990–1991, 145–157; Szőke 1992, 841–968; Szőke 1994, 77–84.

[55] See for example: Szőke 1990–1991, 145–157; Medgyesi 1992, 253–267; Szőke 1992, 841–968; Szőke 1994, 77–84.

In order to rule over the salt-rich areas in the Transylvanian Plateau, the Avars had to conquer the Gepid communities from that region. It is difficult to ascertain how disastrous this conquest was for the Gepid communities. My personal belief is that the Avars did not wage a war of conquest in Transylvania that led to the extermination of the Gepids. In support of this fact one can mention, on the one hand, the small number of Avar warriors attested in Gepid cemeteries, indicating there was no military group large enough to wage an ample war against the Gepids. One can rather speak of the Avars taking over the area where the salt deposits of Transylvania are located. The Gepid communities were not decimated, but spared to be used to labor in the extraction and trade of salt from Transylvania. It is very likely that the Gepids lived alongside the Avars in the same villages. On the level of the cemeteries I have already noted the fact that the two ethnic groups shared the same necropolises, especially during the 630–670 period. The fact that the Gepids were not exterminated after 630/650 is attested for example by the Gepid cemeteries in Noşlac and Şpălnaca that include Gepid graves dated to the second half of the 7th century, as well as by Avar graves that date to the end of the 7th century and the beginning of the 8th century. Naturally, the leaders of the Avar tribes were also the leaders of these mixed communities.

A single cemetery used by the civilian population has been discovered in the Transylvanian Plateau, the area where cemeteries of Avar warriors are concentrated. This is the necropolis in Sâncrai (Alba County), dated to the final decades of the 7th century and the first decades of the 8th century[57]. The cemetery is currently under research. A preliminary conclusion is that the archaeological material discovered so far does not include items that might have belonged to the Gepid environment. Even if Gepid artifacts are missing from this cemetery, a series of material culture elements developed by the Gepid tribes were certainly adopted by the Avars. Still, it is more difficult to identify such elements due to the lack of excavations in settlements and other cemeteries where members of the civilian communities were buried during the 7th–8th centuries in Transylvania.

Specialists who support the existence of mining activities in Arieşului Valley mention the fact that the pieces of archaeological evidence that attest the said activities were subsequently destroyed by the gold extraction that continued during the Middle Ages and then during the Modern Era[58]. On the other hand, the practice of gold sluicing in Arieşului Valley was also presumed, though such activities also leave no traces[59]. Until new data become available, it is difficult to contradict or confirm the exploitation of gold in Arieşului Valley during the 7th–8th centuries. I should mention the fact no Avar (or other) discoveries have been made in the mountainous area crossed by River Arieş.

Some researchers believe that Târnavelor Depression was a very significant geographic area for the leaders of the Avar Khaganate for the extension of their pasture areas[60]. It is difficult to ascertain how ample this phenomenon actually was. Two cemeteries were discovered in that area, Bratei 3 and Bratei 2, that also contain Avar graves. Artifacts of certain Avarstyle were found in the area between Târnava and Târnăveni. All the other metal artifacts dated to the second half of the 7th century that have been mentioned as arguments in support of the direct Avar rule over the entire

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[56] See: Horedt 1956, 393–406; Horedt 1958, 61–108; Horedt 1968, 103–120; Rusu 1977, 169–213; Erdély Története 1986, 164–177; Bóna 1990, 90–101; Garam 1994, 171–181; Rusu 1997, 222–271.

[57] On going archaeological research (C. Cosma *et al.*).

[58] For these issues see for example Bărcăcilă 1939–1942, 203–227, Rusu 1977, 192, Rusu 1997, 247.

[59] For these issues see for example Bărcăcilă 1939–1942, 203–227, Rusu 1977, 192, Rusu 1997, 247.

[60] Erdély Története 1986, 164,168–169, 176–177; Bóna 1990, 90–97; Garam 1994, 179.

Târnavelor Depression are few in numbers, are stray finds, and lack archaeological contexts[61]. Most of the items display no ethnic characteristics and are thus artifacts carrying no data for solid scientific interpretations such as a population taking control over a certain territory, namely the Avars conquering/ruling over Târnavelor Depression. Questions such as how wide was the territory under Avar control or how intensive was the Avar habitation in Târnavelor area could only be answered based on data revealed by future archaeological researches.

In conclusion, I believe that the most important reason that made the Avar khagans actually dominate the Transylvanian area around the Bend of River Mureş was economical in nature. The leaders of the Avar Empire wished to have direct control over the salt reserves in the Transylvanian Plateau. In order to obtain it, they naturally had to conquer/occupy the Gepid centers in the middle of the Transylvanian Plateau. One can easily note on the map of discoveries the fact that in the area around the Bend of River Mureş (approximately the center of the Transylvanian Plateau, see Map 1), where most of the Avar (but also Gepid) cemeteries are concentrated, is precisely the territory where a good part of the salt resources of Transylvania are located. The Avar power center established after 630/650 in the center of the Transylvanian Plateau continued its existence, in the same territory, during the 8th century as well.

Territorial boundaries. How large was the territory occupied by the Avars in Transylvania? Certain specialists believe that the entire territory of Transylvania was conquered and integrated in the Avar Khaganate. These researchers took into consideration not only the Avar cemeteries and singular graves, but also a series of artifacts discovered by chance and lacking an archaeological context. The latter have been used as proof of an actual Avar rule over the territory where the items were discovered[62]. Indeed, the artifacts in question appear "scattered" on the territory of the Transylvanian Plateau. One must nevertheless state the fact that most of them are artifacts without ethnical attributes and thus they could have been worn/used by members of all ethnical groups inhabiting the Transylvanian Depression during the final centuries of the first Christian millennium. As for me, I believe the issue of delimiting the area actually occupied by the Avars in the Transylvanian Plateau should only be solved taking into account a series of methodological aspects that I shall present henceforth.

In strict reference to the eastern part of the Carpathian Basin one can note that not every archeological artifact with "ethnic attribute(s)" that is a stray find, most of them unique presences in different areas of the Transylvanian Plateau, can be considered solid proof of an actual Avar domination over those territories. It is very possible that such items were lost by "Avars", possibly even by Avar warriors, that were only there temporarily. The presence of Avar-origin objects, singular and lacking archaeological contexts, in different places in the eastern part of the Carpathian Basin can also be the result of trade between the communities of that time and that the one who sold or bought (and then lost or buried) them had no connection to the Avar ethnical group. The fact that some Avar-origin items are attested in the territories located far from the Avar center in Transylvania, around the Bent of River Mureș, can also be explained through the activity of itinerant craftsmen who made certain items on demand for persons that might not have been Avars. Also, a series of Avar-origin metal artifacts can be interpreted as gifts made by the Avar leaders to local leaders of other ethnicities. In the case of Transylvania, the latter were the leaders of the Slavic tribes, as attested by the Avar metal items discovered in the Slavic tumular cemeteries in Someșeni and Nușfalău. I believe that a pot, a belt buckle, a belt end, a coin etc., discovered by chance in a geographic area that is far from the area of the Avar cemeteries in Transylvania cannot be used as

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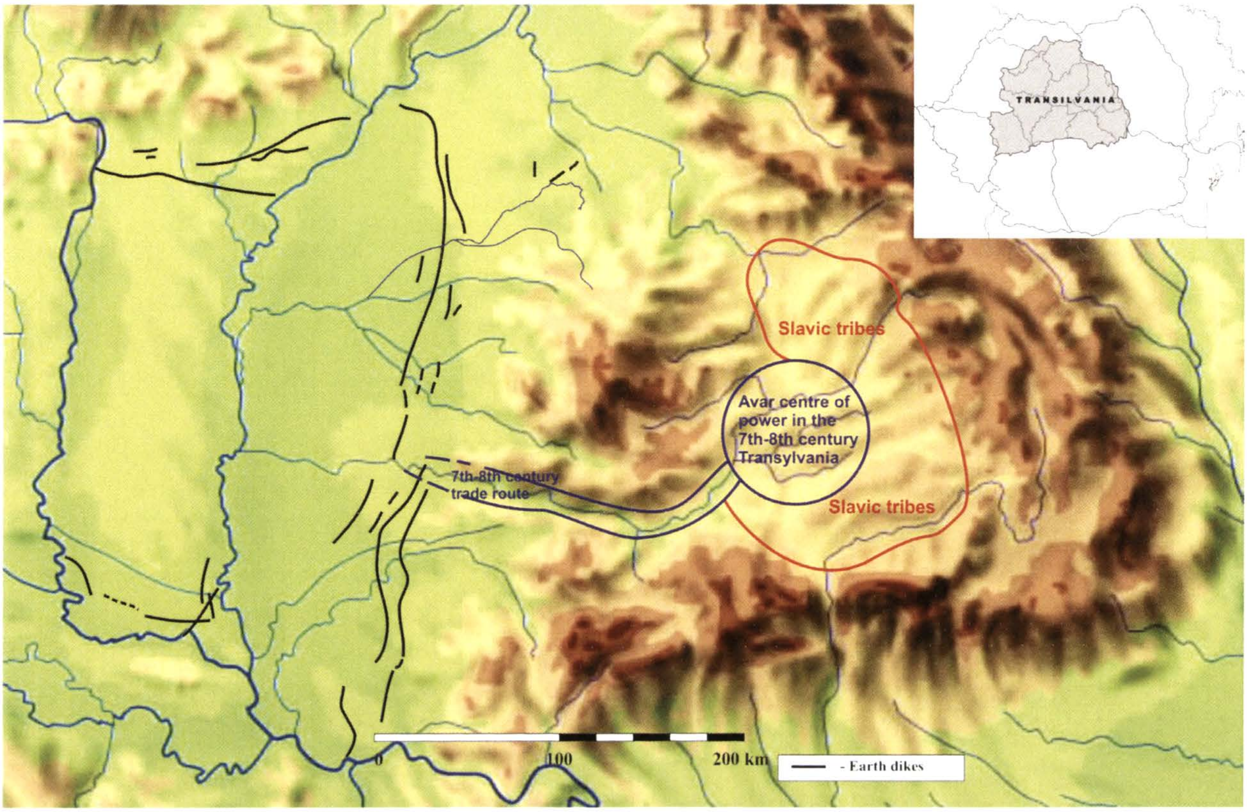
[61] Horedt 1956, 386–398; Horedt 1958, 91–108; Horedt 1968, 116–118; Erdély Története 1986, 164,168–169, 176–177.

[62] Horedt 1956, 396–398; Horedt 1958, 91–108; Horedt 1968, 116–118; Erdély Története 1986, 164–177; Bóna 1990, 90–101; Garam 1994, 171–181; Szentpéteri 2002.


TRANSILVANIA
Slavic tribes
Avar centre of power in the 7th-8th century Transylvania
7th-8th century trade route
Slavic tribes
0
100
200 km
- Earth dikes

Map 1. The political situation in Transylvania during the 7th–8th centuries

viable marker for setting the political borders of the Avar Khaganate in the Transylvanian Plateau as far as by the Carpathian Bend.

In order to answer as precisely as possible to the question "How large was the territory that the Avars occupied in Transylvania?" I chose to take into consideration only the funerary discoveries (cemeteries and graves) that can be attributed beyond doubt to Avar warriors. To these I only added stray finds that were found with certainty in Avar graves, consisting of weapons, elements of horse tack and jewelry items that decorated the clothes of Avar warriors of various ranks, of their military retinue or of high ranking persons from the hierarchy of the Avar society. I have intentionally left out all artifacts without chronological and power and without ethnic attributes that have been discovered by chance in different locations in Transylvania. No topographic data are available regarding these items and they lack archaeological contexts.

The reason why I chose to analyze only the archaeological evidence that can be attributed beyond doubt to the Avars is a simple one: Avar warriors, of various ranks, and their military retinues from the Carpathian Basin are individualized through their dress, lifestyle, fighting style, and especially funerary rituals that are unique, specific to their ethnicity[63]. The Avar cemeteries present in certain areas that are closer or farther away from the Avar center in Pannonia are the best proof of the fact that those territories were under the effective rule of the Avark khagans. This reasoning can also be employed for the presence of the Avars in the Transylvanian Depression.

In the case of the Transylvanian Plateau, the Avar graves and cemeteries dated to other periods than the 7th and 8th centuries are concentrated in a single geographic area, namely the territory by the Bend of River Mureș, between Câmpia Turzii and Teiuș, on both sides of the Mureș (Map 1).

The geographic distribution of Avar cemeteries in the Transylvanian Plateau indicates the existence of a single Avar power center in Transylvania. The differences in social status between those buried in these necropolises, but also between the cemeteries themselves, support the idea that the power center in Transylvania was coordinated by several Avar leaders that chose to establish their "command headquarters" in different geographic places located between Teiuş and CâmpiaTurzii: Teiuş, Cicău or Câmpia Turzii[64]. The common warriors buried in the Avar cemeteries discovered in Gâmbaş, Aiud, Aiudul de Sus, Heria, Lopadea Nouă, Măgina or Stremţ were subordinated to these leaders.

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[63] For example: Mihăescu *et al.* 1970, 552–557 (Mauricius, *Arta militară*, XI.2); Lung 2001, 125, Footnote 138; Horedt 1958, 62–69; Bóna 1980, 31–95; Erdély Története 1986, 164–166; Garam 1987b, 191–202; Pohl 1988; Pohl 2003, 574–578.

Graves of Avar princes, with rich inventories (including gold artifacts), like those found in Pannonia, are missing so far from Transylvania[65]. In this regard, the case of Transylvania can be considered different from that of other provinces part of the Avar Empire, political and administrative entities ruled, in the name of the khagan, by a single high-ranking individual from the hierarchy of the Avar Khaganate, such as the dignitary from Kunágota (Hungary) who ruled over the area of the Lower Tisa[66] or the leader who coordinated the Avar center in the area of the Upper Tisa[67].

The economic importance of the Transylvanian Plateau during the 7th–8th centuries, based mainly on its salt reserves, supports the hypothesis of an Avar center in the area of the Bend of River Mureş that had the status of an "Aul" province, directly subordinated to the Avar khagans in Pannonia. The latter exerted their direct control over the center of Transylvania through personal representatives. These were prestigious warriors, accompanied in Transylvania by their military retinues and by war bands/units of common warriors who were part of the Avar army. The simple fact that they personally represented the khagan implies the fact that the warriors in question were highly trusted and thus held higher positions among the military leaders of the Avar army. Through these individuals, the Avar Khagans instituted an efficient control over the area and at the same time they were able to prevent more efficiently autonomous tendencies or centrifuge movements that were extremely frequent among the warrior societies of that era. All these were mandatory to ensure the optimal conditions for the practice of salt mining activities as to ensure the safe transportation of salt along the Mureş towards the Pannonian Plain, but also commerce in general along the same route. The latter activity was probably one of the main responsibilities of the Avar warriors settled in a series of "garrizons" located downstream in the Mureş Valley, towards Pannonia. Such a center existed in Leşnic (Veţel, Hunedoara County)[68]. Archaeologists discovered there metal artifacts that can be dated to the 8th century belonging to an Avar military leader who probably controlled the garrison that supervised the trade along the Mureş. The 8th century leaders attested by their graves in the center of Transylvania remained faithful to the Khaganate from Pannonia.

The existence of Avar "Auls" and "Ordus" has been presumed to extend until the bend of the Carpathians or in the geographic areas of the cities of Alba Iulia, Cluj-Napoca or Târgu Mureş[69]. I believe that many of these identifications are forced. Starting from an applique and a gold ring "probably found in Alba Iulia" some historians havepostulated the existence of an Avar political and military enter on the territory of the said city, and this is far-fetched. No Avar warrior grave has been identified on the territory of Alba Iulia or its peripheries and rather numerous archaeological excavations have been performed on the territory of the city. In Târgu Mureş, no Avar grave or necropolis has been discovered, though there was a single Byzantine coin from the Early Avar

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[64] Cosma 2015, 254–262.

[65] Lázló 1955; Garam 1993; Kováci, Garam 2002, 81–112.

[66] Erdély Története 1986, 166.

[67] Garam 1994, 175–179.

[68] Cosma 2017, 63.

[69] Erdély Története 1986, 167–168, 171–177; Bóna 1990, 90–97.

Period[70]. Avar cemeteries or graves are also missing fromCluj-Napoca[71]. The discovery in Târgu Secuiesc[72] is not a grave, so it cannot be attributed to an Avar warrior. The sword and horse bit from Târgu Secuiesc, donated to the museum in Sfântu Gheorghe, are stray finds. There is no proof they were discovered together, even less so that they were part of a grave[73]. The sword has been lost, so one cannot provide chronological or ethnic analogies. As for the four pots from Târgu Secuiesc, it is possible they were part of a grave, but rather a Slavic one[74]. Existing bibliography also mentions a sword with curved tip discovered somewhere in Cristuru Secuiesc, also invoked as indication of an Avar presence in the Carpathian Bend[75]. Out of context, the sword remains a simple patrimony item. The bracelets discovered in Rotbav and Rupea, both in Brașov County, and in Sura Mare, Sibiu County[76], are not pieces of evidence supporting the Avar rule over these areas of discovery.

One must also state the fact that during the 7th–8th centuries the area of the Carpathian Bend was invaded by the Slavic tribes and studies dealing with the archaeological situation in south-eastern Transylvania does not mention the presence of Avar cemeteries or graves in that region[77]. Until new data are uncovered, it is even difficult to mention if the Avar khagans were interested in exerting a certain "remote control" over the areas of Făgăraș and Brașov that were already populated, as previously mentioned, by Slavic communities[78].

The small number of Avar cemeteries and graves in Târnavelor Basin dated both to the 7th and to the 8th century, makes it impossible to support the existence of an "Aul" consisting of the territory of Târnavelor Plateau alone. If for the 7th century one can accept a direct control of the valley of Târnava Mare by the warriors subsequently buried in Cemetery no. 3 from Bratei, Târnănveni and Târnava, for the 8th century a similar situation is more difficult to accept. Inhumation graves with Avar inventories were only discovered in the biritual cemetery of Bratei 2, and only one of them can be attributed to an Avar warrior. This does not prove that Târnavelor Valley was actually ruled by the Avars. In the 8th century Târnavelor Basin was occupied by Slavic communities attested by the presence of Mediaș-type necropolises and by a series of rather numerous settlements discovered in Târnavelor Plateau[79]. The size of the constant Avar presence in that area remains a topic for future research. The Avarkhagans, through the leaders dispatched from the power center in the area of the Bend of River Mureș might have been content only with collecting a tribute from the Slavic communities in Târnavelor Depression.

Along the same line of thought, but changing the geographic area of reference, one must observe the fact that all the Avar-origin cast items discovered for example in Dăbâca[80] and Someșeni[81] originate from a Slavic and not an Avar environment. In Someșeni, a municipality located in Someșului Valley (in its sector from the Transylvanian Plateau), the archaeological site of interest here is a Slavic incineration tumular necropolis where bronze items used by the Avar elite were discovered in one of the tumuli. In Dăbâca as well, a village located in the hydrographic

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[70] For verification see Zríny 1976, 148 and Lazăr 1995, 255–261.

[71] For verification see Crişan *et al.* 1992, 118–154.

[72] Comşa 1987, 228.

[73] Horedt 1951, 204–205; Székely 1969, 13–14.

[74] Cosma 2011, 146.

[75] Erdély Története 1986, 174.

[76] Horedt 1956, 396–398; Horedt 1958, 102–104.

[77] Székely 1962, 46–58; Székely 1969, 7–22; Székely 1974, 55–57; Székely 1974–1975a, 35–55; Székely 1974–1975b, 57–61; Székely 1975, 71–79; Székely 1976, 117–123; Székely 1988, 169–198; Székely 1992, 245–306; Stanciu 2015, 338–360.

[78] Comşa 1987, 221, 224, 227–228

[79] Horedt 1976, 35–57; Horedt 1979, 385–394; Székely 1988, 169–198.

[80] Ţiplic 2002–2003, 11; Gáll, Laczkó 2013, 53–74.

[81] Macrea 1959a, 519–527; Macrea 1959b, 515–522.

basin of River Someş, the envisaged site is also a Slavic incineration necropolis. In Jucu de Sus, in Someşului Valley, archaeologists found an incineration necropolis that has not been published yet[82]. All these three sites and other data support the idea that Someşului Valley, down to the river's exit from the Transylvanian Plateau, was occupied by the Slavs throughout the 8th century[83]. This contradicts the suppositions that Someşului Valley (its intra-Carpathian segment) was a region that the Avars used for pasturing their animal herd[84]. The tumular cemetery in Someşeni is directly connected to the tumular cemetery in Nuşfalău[85]. The two cemeteries attest the arrival of groups of Eastern Slavs both in North-West Romania (the cemetery in Nuşfalău) and in the Transylvanian Plateau (the cemetery in Someşeni)[86]. It is certain though that the Avars were interested in having relations of good vicinity with the Slavic communities in the above mentioned areas. This was achieved through offering gifts to the Slavic leaders consisting of metal items worn by the Avar elite. These artifacts attest the recognition of the Slavic leaders by the Avars, to which they related on various levels. One can thus explain the presence of Avar items in Slavic cemeteries, artifacts that conferred upon those who wore them a significant social status in the Slavic communities in the north-western part of the Transylvanian Plateau. The relations between the Avars and the Slavs in Transylvania form nevertheless a much wider topic, to be dealt with in a separate study.

There is no evidence to support the fact that the Avars entered Transylvania through the north, along Someşului Valley or through Meseşului Gates, geographic areas that were ruled by the Slavs. In this context one must mention that the thesis claiming that the Transylvanian "Aul" was subordinated to the secondary Avar power center in the area of the Upper Tisa, a political unit ruled by the "iugur"[87] himself (a position believed to have been the second in importance in the hierarchy of the Avar Empire, after the khagan)[88], cannot be accepted. There is no archaeological evidence to support a direct connection between the Avar power center in Transylvania, from the Bend of River Mureş, and the great Avar center with the headquarters located on the territory of the present-day city of Nyíregyháza, in north-eastern Hungary[89]. Still, areas from North-West Romania were under the control of that center[90].

I. Bóna, making use of logics alone, formulated the hypothesis that the Avars entered Transylvania through Oltului Valley[91]. In the area that River Olt crosses until it flows into the Danube there is no archaeological evidence to attest, even for a short period, an Avar presence in that territory. One can no doubt state that the Avar tribes entered Transylvania through Mureşului Valley, not through the north-western part of the Transylvanian Plateau or from the south-east, through Oltului Valley.

In conclusion, based on the archaeological evidence, I postulate that the area actually controlled by the Avar khagans was restricted to the valley of River Mureş, with an appendix in the area around the Bend of River Mureş, between Teiuş and Câmpia Turzii, and a possible extension in Târnavelor Basin as well (Map 1).Wide territories from Transylvania remained outside the borders of the Avar Empire, such as those in the north and north-eastern parts of the Transylvanian Plateau and the piedmont areas of the Carpathian Arch. Even if one accepts that the Avarkhagans instituted a "remote control"[92] of certain geographic areas, I believe that in the Transylvanian

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[82] Mentions: Stanciu, Bindea 2008, 121; Stanciu *et al.* 2009, 336.
[83] Comşa 1987, 224–225, 229.
[84] Erdély Története 1986, 177.
[85] Comşa 1961, 519–521.
[86] Cosma 2002, 70.
[87] Garam 1994, 179.
[88] Rusu 1977, 194–195; Pohl 1988, 293–300; Garam 1994, 171–181; Rusu 1997, 232–233.
[89] Bóna 1993, 116–118.
[90] Bóna 1993, 116–118; Stanciu 2000, 422–424; Cosma 2002, 57–63, 71–76, 160–161; Cosma 2012, 138–144.
[91] Bóna 1988, 162.
[92] Comşa 1987, 229; Fiedler 1996, 197, 210–211.

Plateau such areas were not too wide. Avar control did not reach the hilly and mountainous areas in the bend region of the Carpathian Mountains. Also, there is no archaeological discovery to prove the fact in the final quarter of the 7th century and in the 8th century the Avar khagans were interested in the north-eastern part of the Transylvanian Plateau. Even if no archaeological evidence exists, it is very likely that in that geographic area the Avars settled for destroying the Gepid power centers, after which they retreated from the area and settled in Mureșului Valley (Map 1).

It is nevertheless certain that the Avar warriors paid much attention to the events in the areas adjacent to their power center located in the middle of the Transylvanian Plateau. From there they intervened in order to maintain the peace or to counteract the centrifuge tendencies manifested on the level of the Slavic communities from the neighboring territories. That area might have extended over a radius of between 50 and 100 km at most from the Avar power center from the Bend of River Mureș. The Avars chose to keep those Slavic communities under observation (involving the Slavic leaders in this process as well) and in certain cases this control was expressed through the collection of tribute[93].

Final considerations. The presence of Avar warriors in Transylvania during the 7th–8th centuries is a reality that cannot be contested, as it is proven by the cemeteries and graves that belong, beyond doubt, to warriors of Avar origin. The first Avar incursions in the Transylvanian Plateau took place after 630 and aimed at occupying/conquering the salt-rich areas in the center of Transylvania. This was only possible after they established their direct control over the Gepid communities in the center of the Transylvanian Plateau. I do not believe we can speak of a conquest of Transylvania, but rather of an act of taking control over a territory that the Avars were interested in due to its salt resources. They did not decimate the Gepid communities, but lived alongside them and used them to extract salt.

According to the archaeological data that can be attributed with certainty to the Avar warriors (cemeteries and graves), one can note the fact that the entrance of the Avars in the Transylvanian Plateau was not a large-scale phenomenon and the territory they actually dominated was much smaller than some specialists have estimated. This territory was restricted to the area between Câmpia Turzii and Teiuș, where the Mureș turns south, on both sides of the river. Current data do not allow one to form a general picture of the way in which the Avar domination in Transylvania ended. The history of the central province of Romania during the first half of the 9th century still holds many uncertainties that only future archaeological researches might decipher.

Based on everything presented so far, I believe one cannot speak at all of an "Avarization" of Transylvania, but rather of a "Slavization" of the region, as Slavic settlements and cemeteries from the 7th–8th/9th centuries have been documented throughout the territory of the Transylvanian Plateau[94]. The Avars made a place for themselves in this Slavic world, in a relatively small geographic area.

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[93] Rusu 1977, 174, 195–196.

[94] Rusu 1971, 714–726; Rusu 1977, 186–188. See also footnote 77.

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Considerations Regarding the Archaeological Chronology and the Dating of Early Medieval Settlements in the Bărăgan Plain (8th–11th Centuries)*

Emilia Corbu

Abstract: *The study synthesizes the current state of research of the issue and briefly exposes the archaeological dating methods of a few early medieval settlements from the Bărăgan Plain. The cultural method, the typological method, the topostratigraphic method, the historical or event method, as well as interdisciplinary methods inspired by contemporary technology are mentioned. Part of them are exemplified through the situation of the Vlădeni "Popina Blagodeasca" site. The majority of the settlements evidentiated through survey were dated using the cultural method. The typological method is based upon the description of the archaeological inventory and its correlation with coins, ornaments or weapons as artefacts with increased chronological expression. An important aspect concerns the statistics of fragmentary ceramic material. It has been noted that the proportions attributed to the different categories are very close in the complexes which functioned simultaneously. An example is the grey ceramics which was found in great percentages in earlier complexes. The topostratigraphic method dates the level or complex according to superpositions or intersections and complexes dated with key artefacts. It is useful in establishing the evolution of the settlement, but less for an exact chronological classification. At Vlădeni "Popina Blagodeasca", the archaeomagnetic method was used to date two archaeological complexes classifiedat different levels. In the first case, the archaeomagnetic dating confirmed the typological dating. In the second case, the topostratigraphic dating was denied. The realization of monographic studies of the archaeological inventories, the dating based on modern technology, as well as the extension of the database of absolute chronology through interdisciplinary studies, would contribute greatly to solving archeological chronology issues. Regarding the inventory monographs, abalance is made of the results of the ceramic studies carried out until now and raises the problem of comparative studies of contemporary cultures (Dridu, Saltovo-Mayaki and the environment of the First Bulgarian Empire).*

Keywords: *dating methods in archaeology, cultural dating, typological dating, ceramics statistics,event dating, archaeomagnetic dating, absolute dating, relative dating, Dridu culture, the First Bulgarian Empire, the Saltovo-Mayaki culture, the Bărăgan Plain.*

The Bărăgan Plain stretches across the present-day territory of the Brăila, Ialomiţa and Călăraşi counties, also being bordered south and east by the Danube, west by the Mostiştea valley and north by the Buzău river (fig. 1). The current state of research indicates two points of imbalance. The first refers to the great number of settlements, against with the poverty of the inventory. However, it cannot be absoluteas long as the research is incomplete in most sites. The second one is an imbalance of historical information. That is to say, for the 5th–7th centuries, in relation to which we dispose of written information, we do not have archaeological finds, whereas for the 8th–11th centuries, although there are numerous archaeological finds, too little literary information can be used. At 15 sites, surveys as well as preventive and systematic excavations were carried out which prove the undoubted presence of some settlements[1]. Of these, only five excavations were large.

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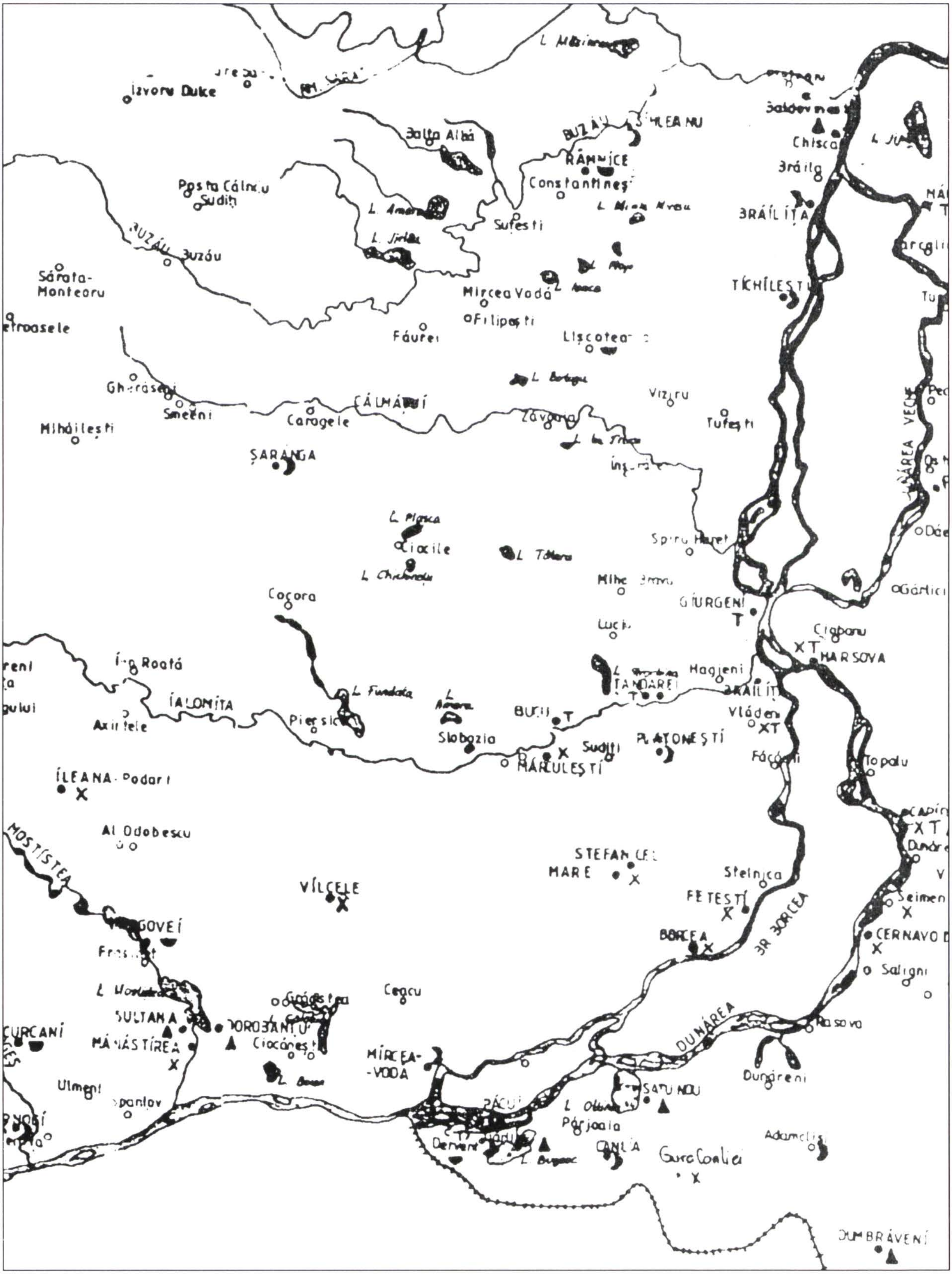
* English translation: Alina Piticaru

[1] Corbu 2006, 41–43.

In three cases, it was noted that the early-medieval settlement cut across ancient settlements, in this case Getic ones. This stratigraphic detail must be mentioned, as it was noted that even in Bulgaria, even within the former Byzantine Empire, where one would have expected continuity of inhabited, early medieval settlements intercrossed Thracian settlements. The settlements of interest here were dated using one or more of the four procedures that I will detail below, from elementary to complex system.


Izvoru Dulce
Balta Albă
BUZĂU
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Constantinești
Poșta Câlnău
Sudiți
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L. Jirlău
Sufești
BUZĂU
Buzău
Sărata-Monteoru
Petroasele
Mircea Vodă
Filipești
Făurei
Lișcoteanca
L. Batogu
Vizuru
Tufești
Gherăseni
Smeeni
Carogele
CĂLMĂȚUI
Zăvoaia
Mihăilești
ȘARANGA
Însurăței
L. Plașca
Ciocile
L. Chiciu
L. Tătaru
Spiru Haret
Mihai Bravu
GIURGENI
Luciu
Cocora
Ion Roată
IALOMIȚA
Axintele
L. Fundata
Piersica
Slobozia
BUCU
ȚĂNDĂREI
Hagieni
PLATONEȘTI
Sudiți
MĂRCULEȘTI
Vlădeni
Făcăeni
Brăila
BRĂILIȚA
Chiscani
TICHILEȘTI
DUNĂREA VECHE
Gârliciu
Cegianu
HÂRȘOVA
Topalu
ILEANA-Podari
Al. Odobescu
VÎLCELE
STEFAN CEL MARE
Stelnica
FETEȘTI
BORCEA
BR. BORCEA
Seimeni
CERNAVODĂ
Saligny
MOSTIȘTEA
Frăsinet
SULTANA
MĂNĂSTIREA
DOROBANȚU
Ciocănești
Gălățuia
Cegacu
CURCANI
Ulmeni
Spanțov
MIRCEA-VODĂ
DUNĂREA
Rasova
Dunăreni
SATU NOU
PĂCUI
L. Oltina
Pârjoaia
Dervent
CANLIA
Gura Canliei
Adamclisi
L. Bugeac
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Fig. 1. Map with the distribution of sites in the Baragan Plain.

(1) The cultural method were used to data a lot of sites. It was applied for the sites that were highlighted following investigations on the surface of the soil. It were data from 8th–11th centuries, based especially on ceramic fragments and usually being referred to as the Dridu culture. It is conjunctural dating; as such, these sites cannot enter a study regarding chronology or cultural evolution (Fig. 1).

(2) The typological method was based on the comparison of the archaeological inventory and the detection of possible analogies. The specialists focused their attention upon ceramics and metal artefacts. This procedure was applied to all the archaeological sites researched either systematically or salvaged, but also to some isolated finds. For example, the Borcea potter's oven, an extraordinary discovery related to ceramic production in the north of the Danube was dated to the 10th–11th centuries based on ceramic fragments discovered around the oven[2]. The method can deliver good results for a settlement on a single archaeological layer, but the typological dating becomes problematic in the case of pluristratified settlements. To surmount this deficiency, the organization and description of ceramic material must be as precise as possible, which has not always been the case. The procedure of looking for analogies was applied differently, the specialist's effort often being sustained in the circle. Some archaeologists have dated the sites of the Romanian Plain by analogy with others from the same area. Others also looked for parallels in other regions of Romania, while occasionally some analogies were followed in Dobrogea (look upon Byzantine territory) as well as in Eastern Europe until Don river(but such approaches appear more likely as exceptions).

The majority of those interested oriented themselves towards the next-door. For example, a large settlement such as the one at Feteşti "Vlaşca" (Ialomiţa county), with 16 dwellings, was chronologically positioned by analogy with the one from Căscioarele (Călăraşi county). There where a few complexes spread out in five points had been discovered at Căscioarele, finds dated, in turn, only by analogy to sites from the Romanian Plain. The Feteşti settlement offered a much more complex situation than Căscioarele and many more dating elements, but the latter settlement was nearby, and the accuracy of the report was impressive as a result. The Bucu settlement is dated by analogy with the one from Dridu, while the famous eponymous settlement is typologically dated after the results from Dinogetia. Dating after the Dinogetia site is not a mistake because the site is located 50 km from Brăila, which marks the northern limit of the Bărăgan. The Brăila area had previously had direct roads towards the villages on the Danube ponds line as well as towards the villages in the Ialomiţa river valley. Even so, the evolution of Dinogetia, as a citadel, was different compared to that of a rural settlement. Rural settlements can precede fortifications, while the latter require a certain historical context to establish and evolve.

I have also applied the typological method, following analogies in extended cultural spaces but I have not always been satisfied with the results. For this reason, I have tried to improve this procedure by using statistics on categories of ceramic material, a method used since the '50s of the past century in the entire archaeological world. I applied it to Vlădeni "Popina Blagodeasca" and I observed that the results were positive, indicating without doubt the archaeological complexes which functioned simultaneously. Thus, even though in one complex 100 ceramic fragments may be found, while another may have 500, the percentages of each ceramic material category will be almost identical in the case in which the two were contemporary. Four technological categories were noted: sandy paste fragments (generally specific to the early Middle Ages), fragments of a fine grey paste, polished, both categories modeled on the wheel; hand-made pottery; ceramics made of quality paste, well fired (oxidation, up to red) as pots, jugs, amphorae. On the site of Popina Blagodeasca, there are three big objectives: the early-medieval settlement; the defensive system; some daco-getae archaeological complexes. With regards to the early-medieval settlement, statistics was applied to inventory of each complex and then comparisons were made. The procedure was the same in the case of the Getic complexes, which are much earlier. In the case of the early-medieval settlement, the results indicate a percentage of 50–60% sandy ceramics and approximately 10% grey ceramics, and, on average, 20% red ceramics. It is a situation with parallels with other settlements of the period. For the Getic features, the statistics indicate a percentage of 70% hand-made pottery.

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[2] Papasima, Oprea 1984, 240.

Dating of defensive-system on the inventory is a challenge. Generally, the chronological classification of fortifications is difficult, for intrinsic reasons. We can mention here: their temporary usage, the location outside of settlements, the change of their functionality, and as a result the poor and disparate inventory. As in other places, the inventory of the "Popina Blagodeasca" defensive-system is very poor, with very fragmentary ceramic material which cannot be reconstituted. With the exception of sandy and grey ceramics made on the hand-wheel, which are specific to the 8th–10th centuries, the other two categories appear in all the historical periods, from the Getae, up to the 11th century.

The statistics of the inventory was carried out for each section (trench) in which the defensive ditch were discoveried. The results suggest unique characteristics. The first important observation was that the material reflects the stratigraphic situation of the place. That is to say, in the area in which the ditch was crossed by the early-medieval settlement, early medieval ceramics was found, while in the area in which the ditch destroyed Getic features, we find materials that are specific to the period. However, the chronological classification between the Getic period and the 9th century is unsatisfying, that is to say very long, over a thousand years.

		Sandy ceramics	**Grey ceramics**	**Red paste ceramics**	**Handmade ceramics**
1	S. E /2006, 2007	7%	11%	32%	50,4%
2	S. F /2007	20%	-	50%	30%
3	S. F/2014 the second ditch	16,31%	11,34%	36,87%	35,46%
4	S. G/2011-fossatum	55%	22,37%	21,76%	-
5	S I/2013	58%	14,3%	23%	5,5%
6	S G c. 11–15, Cas. A53, SK the second ditch	48,55%	15,89%	20,52%	15%
7	S. H /2012, 2013	50,12%	13,88%	23%	12%
8	SM, c. 5–9/2016 Fossatum	47,24%	15%	10,23%	26,27%

Tab. 1. The settlement from Vlădeni "Popina Blagodeasca", Ialomiţa country. The defensive ditch, proportions of the ceramic categories. S. = trench. Cas. = area. c. = square

The second ascertainment which can support the chronological classification is the great percentage of the grey ceramics and the red paste ceramics. The proportion is much greater than in the early medieval settlements and in the Getic ones. The grey ceramics has an average of 15% (between 11–22%), while the red ceramics has an average of 30% (percentages between 10–50%). In other words, in these categories we will also find the ceramic specific to the time period in which the defensive system was functioning. A parallel could orient towards the environment of the 6th–7th centuries settlements, in which the red fabric and grey fabric ceramics were simultaneously used. If we add typology criteria to this hypothesis, such as hand-made fragments of bowl with a lip lightly curved towards the inside or a paste containing sand and chalkstone, then this chronological classification could be confirmed[3].

Nevertheless, the typological classification did not stop here, attempting to date the defensive system type. The Byzantine military treatises describe ten types, of which only three used walls. This aspect is very important, since Romanian archaeological literature emphasizes the wall more than the ditch. It is worth remembering that only the Byzantines used the ditch during that period, as the Persians used ditch-trenches only during battles; such defensive ditches are not known for other populations. The precious details offered by the Byzantine strategists could support the hypothesis that the Vlădeni "Popina Blagodeasca" defensive system is a stronghold raised in enemy territory or on the periphery in view of or during a military conflict[4].

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[3] Corbu 2019, 355–373.

(3) The topostratigraphic method was applied only at the systematically researched sites in which the repeated intersection of archaeological complexes was observed. The method only indicates the evolution of a settlement, the chronology being established on the basis of the typology of the inventory. Sometimes, archaeologists consider that the chronological interval between two levels can be of one century. Thus, if a typologically-dated level from the 9th–10th centuries exists, an intersecting complex could be placed in a level of the 10th–11th centuries. The procedure can create errors, as shown by Eugenia Zaharia. One of the best topostratigraphic classifications was made for Capidava by the regretted Radu Florescu, and it is based particularly on stratigraphic sequences[5]. The topostratigraphic dating was difficult for Dinogetia as well since the oldest level of early medieval occupation disturbed the Roman-Byzantine layer, and the newer levels of the early-medieval habitation disturbed the previous ones. Intercrossing caused many pieces to reach a secondary position. Furthermore, the early medieval settlement is located on an uneven surface. For this reason, the depth at which the materials were recorded is a relative one[6]. Nevertheless, topostratigraphic dating offers some security for when two completely different complex categories intersect, such as a necropolis superposing a settlement. The culture layer from "Popina Blagodeasca" is rather thin (between 10–25 cm), being more consistent in the complex portion. The conclusion would have been that only one occupation level exists, if only one salvage excavation would have taken place on a restricted surface. In reality, the great number of complexes identified in superposition relations – cottages intersected by domestic ovens and food storage pits, palisade spierced by cottages and pits – led us to conclude the existence of three different levels. In conclusion, the topostratigraphic situation helps to establish an evolution of the settlement and of possible events, but less of the dating itself.

(4) The historical or event method was particularly used to date the Byzantine fortresses of Dobrogea. Two great historical realities were dated through an historical event. The first is the Byzantine return to the Lower Danube in 971 linked of appearance and development of fortresses in Dobrogea. The second is suspension of habitation in most rural settlements of the Dridu culture explained by the Pecheneg`s migration. Eugenia Zaharia, as well as Maria Comşa, linked the ending of inhabitation in the Dridu settlement (and of the culture itself) of the Pecheneg invasion, from the beginning of the 11th century. The expert literature put about data 971 and 1025, regarding the Byzantines returns to the Lower Danube and the approximate ones associated with the Pecheneg invasion. These are data and events which are relevant, and the consequences can be found in the Dobrogea archaeological situation. But this relevance seems to not exist for the Bărăgan Plain where all the settlements have the 10th century as a common denominator.

Some settlements suspended their existence in the first half of 10th century, while others begin in the second half of the same century. The situation appears to be somewhat paradoxical because go against to stereotypical scenario accepted by historians and archaeologists, according to which a period of political calm devoid of any bad events favors the stability and development of the settlements. However, the 10th century cannot be characterized thus, quite the opposite. The beginning of the century was marked by the long and warrior 34 year reign of czar Simeon of Bulgaria (893–927), while the second half of the century was marked by the presence of the Pechenegs in the north of the Black Sea and their descent towards the Danube, in front of the Dristra fortress. Consequently, a normal question arises. Either the political situation must have had no effect upon the Bărăgan Plain inhabitation or are some of these chronological dates erroneous? It is possible

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[4] Corbu 2018, 489–495.

[5] Florescu, Covacef, 1988–1989, 198–247.

[6] Ştefan *et al.* 1967, 196.

	Settlements	The typologial method	Topo stratigraphic method	The cultural method	Method historical documentary	Method Physicochemical	Chronology
1	Baldovineşti-Brăila	x	-	-	-	-	11 c. AD
2	Bucu-Ialomita	x	-	-	-	-	10–11 c. AD
3	Căscioarele Călăraşi - "Suharna" - "Suviţa-Hotarului" - "La stână" - "La Slom" - "Valea Coşarului" - "Valea Fântânilor"	x					9–10 c. AD
4	Chirnogi-Călăraşi	-	-	x	-	-	8–9 c. AD
5	Dervent-Călăraşi						11 c. AD
6	Dridu-Ialomita	x	x	-	-	-	10–11 c. AD
7	Feteşti-Vlaşca – Ialomiţa	x	-	-	-	-	10 c. AD
8	Ileana-Podari – Ialomiţa	x	-	-	-	-	10 c. AD
9	Mănăstirea-Călăraşi	x	-	-	-	-	10 c. AD
10	Mărculeşti-Ialomiţa	-	-	x	-	-	9–10 c. AD
11	Piua-Petrii Ialomiţa	x	-	-	-	-	10–11 c. AD
12	Ştefan cel Mare – "Feteasca"	x	-	-	-	-	9–10 c. AD
13	Tăndărei-Ialomiţa	x	-	-	-	-	10–11 c. AD
14	Vlădeni "Popina Blagodeasca"	x	x	x	x	x	9–11 c. AD
15	Vâlcele-Călăraşi	x	-	-	-	-	10–11 c. AD
	X-type of method to date from						

Tab. 2. Chronological data methods apllied to early-medieval settlements discovered in Bărăgan Plain

that they were only dated from the 9th century, and that in the next century, their evolution would take a different turn. A peaceful period was more likely in the 8th and 9th centuries, if we were to analyze the political history of the area, when the Byzantine Empire had good relations with the Khazar Empire. Only the weakening of the Khazars allowed the Pechenegs to reach the Danube. The presence of the Pechenegs however does not solely mean wars and visible destruction in the Byzantine fortresses. Initially, they only intended to secure the routes specific to their lifestyle as great cattle breeders. From an archaeological point of view, these political changes can be deciphered in the material culture of an area. An unheard diversity of pottery was noted, regarding the fabric, the decoration and the production technique, in a study about the ceramics from the second half of the 9th century and the first half of the 10th century from the Lower Danube. This variety in the pottery field was considered the fruit of a positive cultural evolution, likened to a maturation of the ceramic production[7]. It can also be, however, the result of some insufficiently studied cultural mixtures.

Regarding the dating of the defensive system from Vlădeni "Popina Blagodeasca", it could be connected to two military events that took place in the Bărăgan Plain. The first one occurred in 594, Priscus' campaign against a population from the north of the Danube count to be *sclaveni* (the chief Ardagast and king Musokios are mentioned). The war ended with the Byzantines' victory, lasted from spring until autumn. But real end of war was the revolt of the soldiers against emperor Mauricius, who had asked them to spend the winter in the north of the Danube. The soldiers refused, motivating the wickedness of the inhabitants and the unbearable cold. The second one is tied to the presence of the Bulgars in 684 in Onglos. Although the location of Onglos remains an unfinished dispute, I have proposed its location in the area of the High Plateau of Hagieni, a geographical oddity located in the midst of the steppe[8]. I am personally inclined towards the second event. As a result, I have correlated the typological method (according to inventory and stronghold type) with event dating for the defensive-system from Vlădeni "Popina Blagodeasca".

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[7] Corbu 2008, 127–140.

(5) The interdisciplinary methods inspired by contemporary technology should get proper attention. The archaeomagnetic dating method was applied, with the results already published, at the Vlădeni "Popina Blagodeasca"[9]. A problem has been brought by correlation of these results with the typological dating of the ceramics. Two complexes, a cottage and a domestic oven (placed approximately 50 m from each other (on two different levels) given the analised samples. The cottage was found at the base of a stratigraphic sandwich. The domestic oven crossed a cottage with a stone oven. Typologically and stratigraphically, the cottage was dated to the first half of the 9th century. The oven was dated topostratigraphically to the second half of the 10th century – the first half of the 11th century. My opinion was based upon the Romanian archaeological practice of correlating the level with the century. The archaeomagnetic determinations confirmed the dating of the cottage. The last firing in the oven of the cottage took place in 835 AD. However, the dating proposed for the domestic oven was refuted by almost a century. More precisely, the last firing took place in 885 AD. Consequently, the oven`s level were following the cottage`s level without an abandonment period. Moreover, this was also visible in the stratigraphy of the site where the archaeological levels were fairly thin. Also, the great percentage of grey ceramics proves a similarities:15% in the cottage and 20% in oven nr. 12 for example.

In their ensemble, the specifications made above refer to settlements. Additionally, there are seven cimitieries of inhumation, incineration or biritual, along with some isolated graves, in Bărăgan Plain. Their dating was carried out typologically, based on the inventory or on the funerary folk customs. The inventory has been found insideţ a small percent of graves[10]. This would explain the attention given to funerary rites. Many archeaologist believe that only the local population of Daco-Roman origins and the Slavs practiced incineration, these attributes pleading for an earlier dating, during the 9th–10th centuries. It was believed that all the Turanians practiced inhumation and for the most part it was the case. Romanian archaeologists never took into account the fact that some of the Pechenegs would incinerate, discussing those who practiced the Madjudzi faith, influenced – we think – by Persian Zoroastrianism. Such groups migrated to the Byzantine Empire, where they are mentioned by the chronicles of the times[11]. It could mean that incineration was used up to the beginning of the 11th century. Most Pechenegs were Manicheans and were buried. That is reason because I preferred to analised settlements which, through the diversity of their inventory, offer more dating criteria.

Conclusions. What else is there to do? Two ways are outlined: first, monographic inventory studies, and second, interdisciplinary investigations in the domain of absolute chronology for the development of the chronological basis.

(I) Surely, the detailed examination of the inventory is an important effort for chronological positioning. Monographic studies should start from the stage marked by the investigations carried out by Maria Comşa and Eugenia Zaharia (particularly in the ceramics field), as main sources of long-term inspiration for the archaeology of the Bărăgan area. In 1963, Maria Comşa established and described early medieval ceramics on a chronological axis in a study referring to the Balkan-Danubian culture, a process which remains a model of archaeological approach. She examined overall pottery discovered up to that point on the Romanian territory, but the dating also being based upon other artefact categories: jewelry, arrows and some chirilic alphabet signs.

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[8] Corbu 2013, 168.

[9] Corbu, Şuteu 2007; Corbu 2013, 154–159.

[10] Corbu 2006, 50–54.

[11] Sherbak 1957, 372.

The parallels were found in treasures in Russia, Ukraine and Moldova, as well as in Late-Avar and Moravian cimitiries. The conclusion was the Balkan-Danubian culture were developed during the first decades of the 9th century to the first decades of the 11th century[12]. The end of culture would have been brought on by the Pecheneg invasion. Whether, it was recognized or not, we must say that this chronological classification influenced all later dating. It was established in this way the procedure through which the ceramics dates a site; it is not the site which, through its multiple variables, dates the ceramic material.

In the same time, Eugenia Zaharia proposed a dating method that we would categorize today as anthropological namely, one starting from the culture to the chronology. The process consists of first defining a culture with local roots, affixing this culture within the historical events of the period (migrations, foundation of new states, the almost permanent Byzantine culture influence) and, lastly the dating of the sites[13]. In addition, as cultural expressivity, the materials from the cimitieries were separated from the ones in the settlements[14]. As in the case of Maria Comşa, the dating of the Dridu settlement itself was based on ceramics, more specifically, on the analogies with the pottery discovered at Dinogetia and Păcuiul lui Soare. Subsequently, in fact, the dating of the Dridu settlement was strictly typological, with reference to the period between the second half of the 10th century and the first half of the 11th century.

In this context, the dating of Dinogetia is important, as this Dobrogean fortress also became the key to chronological positioning for the sites in the Bărăgan Plain and others. Basically, at the basis of the dating of this citadel stood the Byzantine coins discovered in closed complexes, as well as the correlation of the numismatic evidence with the archaeological inventory[15]. The upper limit was established by coins and specific topostratigraphic situations. For example, cottage nr. 38 (of a blacksmith) has been crossed by two cottages. One belonging to a level of burning with pottery in situ from the first half of the 11th century, while its oven was cut by grave nr. 26. On the floor of cottage nr. 40, there was a deposit of 100 coins from Michael IV the Paphlagonian (1034–1041). The dating to the 10th and 11th centuries was also confirmed by the Russian, Slavic and Byzantine ceramics found in the settlement, as well as the nomadic pottery of the Pechenegs. The lower limit was also specified by the association of ceramics with key pieces, such as coins, metal objects, Byzantine ceramics and amphorae[16]. The presence of Saltovo-Mayaki pottery at Dinogetia is a real question because, theoretically at least, it could be dated to the the second half of 8th to first half of 10th centuries. This is an aspect which contradicts the affirmation of the authors regarding the inexistence of a clearly precised level from the 9th–10th centuries. The authors' explanation about a late presence of this ceramic type would suppose an evolved over 200 years. Two hundred years is a long time for the Early Middle Ages dynamics. I rather think that Saltovo-Maiaky pottery can be a proof to a level data from the 9th–10th centuries, destroyed by the subsequent occupation (and consequently difficult to study). The aforementioned centuries could be the lower limit of the Dinogetia site.

Following the inventorying and classification of the ceramic material discovered in settlements of the south of Romania, we found that the differences of fabrics are very small (although the entire typology is based upon fabrics), which implies that we cannot talk about a long evolution over time[17]. We could bet on the importance of some future studies which would make comparisons with the pottery of neighboring archaeological areas, with reference to the Khazar Saltovo-Mayaki culture and the one of the First Bulgarian Empire. It is worth remembering that in dating the archaeological sites from the Romanian Plain and Dobrogea, analogies from both cultural environments were used. They illustrate the atmosphere of the Khazar Empire and that of the Byzantine Empire, two neighbors at the Black Sea with peaceful relations between them[18].

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[12] Comşa 1963, 119

[13] Zaharia 1967, 97

[14] Zaharia 1967, 102

[15] Ştefan *et al.* 1967, 196–227

[16] Ştefan *et al.* 1967, 196

[17] Corbu 2006, 123–164

Nevertheless, the question arises as to the real utility of such an approach, and the response can only be a positive one if we take into account the geographical factor. However, it is negative from the current state of research. Let`s to explain me! In the geographical sense, the Bărăgan Plain is crossed by two routes towards the north of the Black Sea. The first one is on land, because the Eurasian Steppe corridor closes here, and the second one is on water. The Bărăgan is bordered for almost 200 km by the Danube, which flows into the Black Sea, a "Byzantine sea" at that time. In the 9th century, the north of the Black Sea became vulnerable in the area of the Dnieper River, as two notable events occurred. The Russians conquered Kiev from the Khazars in 862, which allowed them to descend to the Black Sea and attack Constantinople from there. The Pechenegs, after pushing the Magyars towards Pannonia in 896, occupied the area between the Dnieper and Dniester (Atelkuz), depriving the Khazars of defense on the western flank. Therefore, when the Saltovo-Mayaki culture was fading in the north of the Black Sea, the Dridu culture was flourishing in Bărăgan. The Bărăgan Plain was also bordering the Byzantine Empire, on whose territory, the First Bulgarian Kingdom later developed, in the northeast of Moesia. In the past, the Danube was a difficult frontier to cross, as its major riverbed was kept intact. The Danube has two beds, one is major riverbed, the second is the minor riverbed. The major riverbed consist in the famous marshes to the north of the river, extending over a width of 4–12 km from the waterline[19]. This proves that, after settling in the south of the Danube, the Bulgars broke their connection with the legendary Onglos, a territory situated north of the river. The Onglos is no longer mentioned, although the documentary sources referring to the Bulgarians are more and more numerous.

In relation to pottery, the afore mentioned comparative studies are risky, because the three archaeological cultures have been studied through inventory lots from different site categories. The Dridu culture distinguishes itself through a rural aspect, proven by a swarm of settlements. The Saltovo-Mayaki culture was researched on discoveries from two Khazar fortresses, Savgar and Sarkel[20]. The culture of the First Bulgarian Kingdom was set out on investigations from two fortresses, metropolis Preslav and Pliska. Our opinion is that the cultural parallels are a result of the good Byzantine-Khazar relations of the 9th century, which allowed merchants to travel safely over large territories. The fact that everything is due to the diligent merchants or craftsmen is proven by the change of the cultural facies from the second half of the 10th century, when the Byzantines were no longer friends with the Khazars that were strategically reinforced on the Volga. The Pechenegs and the Russians were the new armed neighbours of Byzantines from the north of the Black Sea.

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[18] The First Bulgarian Empire picked up a great part of the Byzantine material and spiritual culture, as proven first and foremost by the results of archaeological research in the two capitals of the state.

[19] Corbu 2013 a. 85–96; Corbu 2013b,16–25.

[20] The Saltovo-Mayaki culture specific to the Khazar Empire was already mentioned in 1900, thus studied long before the Slavic one. The pottery of this culture is characterized by the association of sandy ceramics with grey ceramics. The site of Saltovo (a fortified city) was identified as the old Khazar city Savgar, located on the north-western border of the Empire. The inhumation necropolises around the city were mostly studied, over 700 graves, in which several populations, Alans, Turks and Protobulgarians, were identified anthropologically. The inventory of the necropolis reflected commercial relations with the Lower Danube, Central Volga, Crimea, Northern Caucasus, China and India. Saltovo was surrounded by four Slavic tribes which paid tribute to the Khazars. It was dated to the 9th century based on 200 Arab coins. To the latter, some Byzantine coins from the 8th century are added (Kryganov 2001, 2, 347–357). The coins found in tombs were pierced. However, the specific archaeological environment is better known from the excavations at Sarkel, the first metropolis of the Khazar Empire (the present-day village of Tsymlyanskaya). Two cultural layers with multiple levels were discovered, which allowed the differentiation of the Saltovo-Mayaki ceramics, on one hand, from the Slavonic, Russian and nomadic ones, ceramics for commercial use, notched ceramics or ceramics belonging to Alan people, on the other. In other words, six ceramic types which at one point mark the evolution of the city from 800 to the 12th century.The research was completed by the excavations from the past 50 years. The research shown the cultural facies of the Early Middle Ages is much more complex than we imagine, and consequently the chronology should operate within shorter intervals.

Another conclusion is that referring only to certain pieces without regard for the socio-political context of the time can be risky. Analogies with the Saltovo-Mayaki culture would only be valid for the 9th century, and less for the 10th century when the Russians prevail in the area. I will give the example of the grey ceramics from Bassarabia, dating from the 10th century, but which appears in the Romanian Plain in contexts of

9th–10th centuries. Moreover, the percentage in which this ceramic type appears in Bassarabia differs from one site to the other[21]. It should be noted that at Sarkel, this pottery type only exists in a small percent of 5%, which should give us some thought, since Sarkel developed in the second half of the 9th century because the citadel was barely being built during the Byzantine emperor Teophilus' time (829–842). Therefore, the high percentage of grey ceramics indicates earlier settlements, as the regretted Maria Comsa also maintained.

(II) From the above, it appears that although archaeologists made sustained efforts to elaborate correct dating, there was nevertheless no specific interest to study archaeological chronology as a science in and of itself, that is, based upon principles and laws. It has not been noticed that archaeologists only control a small part of the vast domain of chronology; they hang the material culture of history and the level of civilization at a specific point in time in an already-sketched chronological tree. For this reason, I think it would be useful to extend the absolute chronology database by dating a greater number of astronomical phenomena mentioned in written sources[22].

Thus, up until the end of the 20th century, over 370 eclipses were recorded that had been mentioned only in medieval sources, of which only a few were dated[23]. Apart from the lunar eclipses, the list of chronology specialists also contains solar eclipses, occultations, the position of planets in relation to the sun at a specific moment, mentioned in Egyptian horoscopes, etc. Let us simply name them astronomical phenomena. Thus, they obtain from the historical documents a series of astronomical phenomena that they compare to another series obtained through specialized measurements on celestial maps. The exact identification of the phenomenon is, however, dependent on the accuracy of the textual description, on the translation, on the experience and culture of the scientist who finally establishes the dating of, say, an eclipse. This can be named classical absolute chronology and it is the framework in which historians have set their references. From this category, the early medieval archaeology from Bărăgan, and not only, benefits from two results, around which an entire history has been built. Astronomers dated to 968 the solar eclipse mentioned by Leon Diaconul in his work[24]. Historians linked to this year the Byzantine return to the Lower Danube, the Byzantine-Russian war which preceded it, as well as the entire history related to the emperor Ioan Tzimisches (969–976). Emperor Constantine Porphyrogenet (912–959) mentions in his work that he is in year 6640 from the Creation[25]. According to the Christian chronology established by Dionysius Exiguus, the scholar emperor wrote his work in 952 AD. Around this date the presence of the Pechenegs in the Lower Danube was also specified. Therefore, exploiting the astronomical dating line by elaborating some interdisciplinary studies would offer us new support points, much more stable than relative dating.

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[21] In the southern sites, it reaches an enormous percentage of 15–20%, while at Hansca it does not exceed 0,22% (Musteaţă 2005,75). Equally highproportions (20%) can also be found at Ştefan cel Mare-Feteasca, in the Călăraşi county (Corbu 1997, 265). We find a high percentage of 15% in cottage nr. 4 from Vlădeni "Popina Blagodeasca", dated archaeomagnetically to the first half of the 9th century. An even greater percentage, 20%, characterizes the material from a domestic oven researched at the same site. Although this proportion can differ from one dwelling to another, there are wide space equivalences throughout the whole settlement. In contrast, at Capidava, although there is a level from the 9th–10th centuries, grey pottery appears only in a 3% proportion (Cursaru-Herlea 2016, 262–263).

[22] The measurement of time has been a concern of scholars and philosophers of all historical epochs. The historical chronology used today is a science that only appeared in the 16th century. Thus, it has an advance of three hundred years compared to archaeology, during which time a chronological outline was created, a type of frame. Archaeological discoveries have filled this frame, like the pieces of a puzzle. We must mention however that both the founders of this science, as well as those of today, are not historians. It is true that apart from Paulus Crusius, a history and mathematics professor at Iena, founders Joseph Scaliger and Dionisios Petavius, as well as Isaac Newton, were passionate about history and attempted to link chronology to the history known by them up to that point (history which, however, does not involve archaeology). As the specialized sciences, the measurement of time has become the domain of mathematicians, astronomers, physicists and celestial mechanics specialists. Their passion for chronology is not given by history, but by the research of celestial bodies. Philologist and astronomer, Scaliger studied ancient calendars, Isaac Newton studied the position of colures (the two circles of the celestial sphere) when he bumped into the chronology issue. Robert Newton investigated the elongation of the moon and consequently had to establish the chronology of lunar eclipses throughout history. It should also be noted that not all scientists agree with the classical chronology. The research from the last century seems to confirm Isaac Newton and Nikolai Morozov who, independently from one another, maintained that Antiquity is shorter. Thus, from an archaeological point of view, the possibility arises that some cultures would have been contemporary and not successive.This hypothesis is also sustained by some of our contemporaries. For example the chronology of ancient Egypt published in 1991 by a British group led by Peter James shows that it is shorter by 250 years (Diacu 2008, 96). We will not go into this topic, but we must observe that not even absolute chronology is so sure after all. In the present study, I have only referred to the traditionally accepted chronology, as it was outlined by Joseph Scalinger and later completed, and upon which the current archaeological chronology was based.

[23] Diacu 2008, 96

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[24] Diacu 2008, 10.

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The Contribution of Pottery to Determining the Relative Chronology of the Early Medieval Sites in Dobrudja*

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Abstract: *The author believes that the data provided by the archaeological discoveries indicate that the early medieval sites from Dobrudja (South-East Romania) contain pottery categories and types that can be constituted in chronological benchmarks and can contribute to establishing the relative chronology of certain complexes, layers, and even sites. This is possible due to the transformations that took place in time inside pottery categories and types. The author envisages both the progressive changes determined by the addition of new elements to pre-existing models and the introduction of shapes and characteristics novel to the area under analysis, i.e. innovations or influences, that most often lasted for only brief periods of time. As for the argumentation, the author focuses on several ceramic categories (fine-fabric pottery, pottery made of kaolin-type clay decorated with paint, glazed pottery), mentioning their period of existence and on some types of pots included in these categories (single-handle jugs, amphora-shaped jugs, bucket-shaped pots, bowls, cauldrons, amphorae), stressing their transformations in terms of shape and decoration. The coexistence of two or more such categories and types can help specialists determine with greater precision the dating of some archaeological contexts. Special, thus rarer shapes and types with a lower frequency among the finds and with shorter periods of existence can contribute to this. The decoration techniques, the manner of associating the decorative motifs, the introduction and disappearance of certain elements that beautified the body of pots can also contribute to obtaining viable chronological moments, considering that pottery can be reasonably employed to set the relative chronology of sites, especially those lacking discoveries with more precise chronological value (jewelry items and dress accessories, coins, seals etc.).*

Keywords: *pottery, chronological indicator, categories, types, decoration.*

It is known that pottery objects are the most numerous items discovered in early medieval settlements and that, in numerous cases, they display general characteristics that are similar from one century to another. The low frequency or even absence of other artifacts than ceramic pots in the habitation layers, that could support narrower chronological determinations, have led to the wider dating of certain archaeological features, solely on the basis of the pottery material, sometimes spanning several centuries. There are nevertheless situations when such precautionary dating can be avoided. For example, the early medieval sites from South-East Romania, with special focus on Dobrudja, both settlements and necropolises, contain ceramic categories and types that have been in use for set periods. The coexistence of two or more such categories and types can aid specialists establish the dating of certain archaeological features with increased precision and, implicitly, defining the characteristics of certain communities during a certain period of existence. Also, vessels have been discovered that are distinguished by form from most of the ceramic material. These types have both a low frequency among the discoveries and an existence rather limited in time. In some cases, the decoration of the surface of the pots can contribute to setting a narrower chronological interval. Naturally, an exhaustive analysis of the chronological progression of all ceramic categories and types present on the sites in Dobrudja, that I hope to complete in the near future, would be useful in establishing more correct datings. Until then I shall present several situations that can be constituted in chronological benchmarks and that can contribute to the avoidance of precautionary datings.

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* English translation: Ana Maria Gruia.

Fine-fabric pottery with reduction firing is present in the early levels of the analyzed period, specific to the 8th–10th centuries. The most frequent shape of this category is the pots without handles. Such items feature throughout the above mentioned interval, with subtle changes in shape that an inexperienced eye can miss. The shape is thus less useful from the perspective of the present analysis. Unlike the pots without handles, the changes in shape of jugs obtained through the addition of elements to the basic model or through remodeling parts of it can turn into chronological indicators. The earliest shape of jugs made of fine fabric is with a single handle and a three-lobed mouth. Inside this ceramic type, the shape is predominant during the 8th–9th centuries in Dobrudja, as indicated by the discoveries made in the necropolises from Istria (Constanța County)[1], Nalbant (Tulcea County)[2], the incineration grave from the former locality of 6 Martie (Sălcioara, Tulcea County)[3] and the possible graves in Poarta Albă (Constanța County)[4], as well as in the settlements from Pantelimonu de Sus (Constanța County)[5], Hârșova "Stația de Epurare" (Constanța County)[6], Târgușor "La est de Sectorul Zootehnic" (Constanța County)[7] and Ghiolul Pietrei (Tulcea County)[8]. The general aspect of the shape features some variations over the two centuries (the narrow cylindrical neck can be tall or of average height, the rounded rim is sometimes slightly thickened towards the outside, the handles that start from the area of the neck and stop on the upper half of the profiled part of the body can be small or average in length, oval and flattened in section), but the presence in the layer of the single-handle jug with three-lobed mouth, part of this ceramic category made of fine fabric, besides the other shapes typical to the category, represent a benchmark of the early phase of the period under analysis. The body of this pot type is preponderantly spherical during the 8th century; during the second half of the same century one encounters, beside it, jugs with ovoid-shaped or bitronconic body. Due to the reduction firing, the surface of the jugs has turned black or displays various nuances of grey and brownish-grey, while the core that can be seen in the breaking lines varies from black to reddish-brown. The entirely-preserved pots discovered so far seem to suggest the fact that jugs of this type became shorter towards the end of the 8th century and in the beginning of the 9th century (from 22–29.5 cm to 16.6–22 cm)[9], but this may be due to the fragmentary preservation of most items rather than to an actual development[10]. After the discovery of more entire items and if the difference is still noticeable, one will have to check if the production of shorter jugs took place before the introduction of fine-fabric amphora-shaped jugs in the ceramic repertoire of Dobrudja or if the difference was determined precisely by the onset of these larger pots. It is possible that after the introduction of the new shape that had rather similar uses during the initial phase (storage, transportation, and drinking of various liquids) the single-handled jugs lost in dimensions and were mostly used for drinking (as cups). The decoration of the early jugs was created through burnishing (among the distinctive elements one can note oblique lines placed in opposite directions, suggesting fir tree branches and short burnished lines grouped in oblique bundles placed in opposite directions), but almost every item also displays several incised elements (Pl. 1/1–5). Few of the jugs display decorative elements in relief, consisting of a stripe placed at the base of the neck or of symmetrically placed knobs forming vertical rows on the body of the pot or longitudinally on the handle[11] (Pl. 1/3).

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[1] Zirra 1963, 389, Fig. 25/1–11; Zirra 1996, 268.

[2] The jug from the bi-ritual necropolis in Nalbant has the earliest dating among the discoveries of this type in Dobrudja (Fiedler 1992, 145, subgroup F XV/5 and Tab. 1).

[3] Mănucu-Adameșteanu 1989, 429; Fiedler 1992, Pl. 41/6.

[4] Comșa E. 1961, 109–111, Fig. 1–2.

[5] Paraschiv-Talmațchi 2014, 369, Pl. VIII/3, 373, Pl. XII/7.

[6] Paraschiv-Talmațchi *et al.* 2015, 420, Pl. IX/1–4.

[7] Paraschiv-Talmațchi 2010, 28.

[8] Mănucu-Adameșteanu 1991, 366

[9] Zirra 1963, 389, Fig. 25.

[10] The jugs from Poarta Albă, dated to the first half of the ninth century, measure 20.3 cm and 24 cm in height, respectively (Comșa E. 1961, 109–110; Fiedler 1992, 143, subgroup XV/1).

Jugs with pseudo-handles can be indicators of the early phase, but they most rarely feature among the discoveries. They belong to the category of fine-fabric pottery with reduction or oxidation firing. An entirely preserved item was discovered in Dobrudja east of Medgidia (Constanța County)[12], together with four other pots. The discovery was made by the workers of the cement factory before the beginning of the rescue archaeological excavations in the early medieval settlement dated to the 9th–10th centuries and the first decades of the 11th century at most[13]. The item, to the best of our knowledge a unique discovery for the Istro-Pontic territory, is remarkable through the presence of small pseudo-handles attached symmetrically, from the area of maximum diameter downwards, at even distances from the handle (Pl. 1/6). A jug with pseudo-handles was discovered in the settlement from Bucov-Tioca (Prahova County)[14], while several others were found in the graves part of necropolises from North-East Bulgaria, in Kjulevča (Šumen Region)[15], Bdinči (Dobrič Region)[16], Balčik (Dobrič Region)[17] and Novi Pazar (Šumen Region)[18]. But, from a quantitative perspective, they feature less than discretely, so even if they might be considered a chronological indicator, one would be lucky to find one in a layer. Jugs with pseudo-handles are dated to the 8th century and the beginning of the 9th century[19]. The item from Medgidia presumably belongs to a necropolis in use before the existence of the settlement and expresses allogenic influences in the ceramic repertoire from the mouth of the Danube[20].

Another pot, made of fine fabric and with reduction firing, belongs to the early phase, In the specialized literature such spots are described as "bucket-shaped", probably due to their tronconic shape, with the lower base smaller and the upper one larger or cylindrical, similar to the pots used by our contemporaries to carry water. Another reason for the coinage of the term is the existence of two perforations right under the rim that suggest the possible attachment of a handle. Still, the small items (with the height varying between 8.7 cm and 14 cm), despite the fact that they display the above mentioned perforations, might have been used as drinking cups and the term bucket is preserved rather because of the terminology employed in specialized works, easily recognizable for specialists. The large items reach up to 32 cm in height.

Tronconic buckets have the rim cut horizontally or rounded and cylindrical buckets have the rim straight, rounded, sometimes slightly thickened or vaguely flared. Most buckets display incised decoration consisting of horizontal lines, sometimes wider, simple or in groups of two or three, placed at relatively even distances, like the iron hoops of wooden buckets. In other cases, the iron hoops are rendered through areas in relief. The wider rows formed between them are filled with stripes of incised wavy lines (Pl. 1/7), with stripes of burnished vertical lines that were only burnished mechanically. The surface of such pots is rarely plain or glazed[21]. The incised decoration can be associated, as presented above, with burnished decoration, but also with applied decoration. Some buckets display "reinforcements" in the area of the perforations, consisting of relief curls that render the wall of the pot thicker and sometimes elevate the perforated area above the rim (Pl. 1/8). The applied decoration also reminds one of the metal eyes for hanging the wooden buckets.

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[11] Condurachi *et al.* 1957, Fig. 56/1; Zirra 1963, 389, Fig. 25/1.9; Fiedler 1992, Pl. 10/6, Pl. 12/4.

[12] Harțuche 1971, 254–257, Fig. 5/3–3_A.

[13] The initial dating to the 10th-11th centuries has been subsequently corrected: Harțuche 1971, 257; Comșa 1979, 153.

[14] Comșa 1978, 84, 90, Fig. 81/12.

[15] Văjarova 1976, 123, Fig. 73/1, 126, Fig. 75/2; Fiedler 1992, Pl. 108/10, Pl. 109/2.7.

[16] Văjarova 1976, 162, Fig. 102/6, 165, Fig. 104/4; Fiedler 1992, Pl. 93/1.3.

[17] Hristova 2015, 102, Fig. 5/12; Dončeva-Petkova *et al.* 2016, 483, Pl. CCXLIII/1.

[18] Stančev, Ivanov 1958, Pl. XII/M36, Pl. XVI/1; Comșa 1979, 152–153; Fiedler 1992, Pl. 113/6; Hristova 2015, 103.

[19] Stančev, Ivanov 1958, 109; Comșa 1979, 152–153; Fiedler 1992, Tab. 1, subgroups FXIII/1–2; Hristova 2015, 118; Dončeva-Petkova *et al.* 2016, 162.

[20] Comșa 1979, 153–156.

Until now, pots of this type have been discovered in Romania on sites from Dobrudja, Walachia, and Transylvania. They were found both in settlements (Dinogetia-Garvăn, Tulcea County[22]; Hârșova, Constanța County[23]; Pantelimonu de Sus[24]; Bucov "Tioca", Prahova County[25]), and in necropolises (Istria – Pl. 1/8[26]; Izvoru, Giurgiu County[27]; Blandiana "Brod", Alba County[28]).

Similar discoveries have also been signaled in north-eastern Bulgaria (Vokil, Silistra Region[29]; Bdinči, Dobrič Region[30]; Balčik, Dobrič Region[31]; Topola, Dobrič Region[32] – Pl. 1/7), in the Republic of Moldavia (Hansca and Molești[33]) and Ukraine (Bogatoe[34]). Still, bucket-shaped pots are not restricted to the area described above, but have also been found, for example, in Norway, but in earlier contexts, dated to the 3rd–6th centuries[35].

At the Lower Danube, this type of pot is specific to the 8th–9th centuries, attested at the earliest in archaeological features specific to the third-sixth decades of the 8th century and remained present until towards the middle of the 9th century[36]. Overall, bucket pots represent a small proportion of all ceramic discoveries, but had a short period of use in this area, of almost one century, thus rendering them, at the current stage of research, a viable indicator for relative chronology.

During the first half of the 9th century the pottery repertoire of Dobrudja was enriched with a new shape, i.e. the two-handle jug (amphora-shaped). For almost a century and a half, amphora-shaped jugs were mostly made out of fine fabric with reduction firing (thus becoming grey, greyish-brown or black in color) or with oxidation firing (to light red or yellowish-red). Cumulating all the data provided by the discoveries made in the necropolises from Istria[37] and Satu Nou (Constanța County), necropolis 2[38] and the settlements in Dinogetia-Garvăn[39], and Pantelimonu de Sus[40], one notes that such jugs had spherical or oval-shaped bodies; narrow necks, cylindrical or tronconic, tall or of average height; round mouths, cylindrical or slightly flared, and the rim rounded and sometimes slightly thickened on the outside. The handles started from the area of the neck and continued down to the upper half of the profiled part of the body, above the maximum diameter. The handles were small or average in length, oval, sometimes almost round in section, and could display longitudinal grooves. In the case of some of the items the handle continued in the lower part with a trapezoidal prominence (Pl. 1/9), more or less obvious, or with a conical protuberance with a flat base. The body of amphora-shaped jugs displays a relatively even mechanical burnishing of the entire surface. They sometimes feature only stripes of burnished lines, average or short, placed vertically or obliquely. Most of the items have the body crossed by grooves, more or less deep, that have been mechanically burnished over. One can say that this is the characteristic decoration of the amphora-shaped jugs from the early phase of this ceramic type (Pl. 1/9).

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[21] Cosma 2011, 152, Pl. 31/129; Aladzhov *et al.* 2017, 162.

[22] Ștefan *et al.* 1959, 570–571, Fig. 5/5; Ștefan *et al.* 1967, 151–152, Fig. 90/2.

[23] Paraschiv-Talmațchi 2015, 407, Pl. IV/6–7.

[24] Paraschiv-Talmațchi 2014, 352, Pl. VIII/4, Pl. XII/9.

[25] Comșa 1978, 89–90, Fig. 78/12, Fig. 81/7.

[26] Zirra1963, Fig. 24/7.

[27] Fiedler 1992, Pl. 36/15.

[28] Cosma 2011, 152, Pl. 31/129.

[29] Aladzhov *et al.* 2017, 162.

[30] Fiedler 1992, Pl. 92/13.

[31] Dončeva-Petkova *et al.* 2016, 101–102, 281.

[32] Daskalov *et al.* 2004, 38, 89; Aladzhov *et al.* 2017, 97.

[33] Postică 1994, 35, Fig. 32/1.

[34] Kozlov 1997–1999, 114, 124, Fig. 16/1-5.

[35] Demuth 2018.

[36] Comșa 1978, 143; Fiedler 1992, Beilage 1; Kozlov 1997–1999, 116; Cosma 2011, 101; Hristova 2015, 107–109; Dončeva-Petkova *et al.* 2016, 163, Fig. 60; Aladzhov *et al.* 2017, 162

[37] Fiedler 1992, Pl. 18/7.

[38] Fiedler 1992, 146.

[39] Ștefan *et al.* 1967, 167.

[40] Paraschiv-Talmațchi 2014, 358, Pl. X/13–15.

The discoveries made so far indicate that in the Istro-Pontic territory fine-fabric amphora-shaped jugs were gradually abandoned during the 10th century and replaced with amphora-shaped jugs made of kaolin-type or common clay. As an exception one should mention the sporadic discovery of amphora-shaped jugs with oxidation firing (Pl. 1/12), that had become yellowish in color after firing[41], in Dinogetia-Garvăn, in features dated to the end of the 10th century and the beginning of the subsequent century (features with coins issued by Ioan Tzimiskes and Basil II) [42]. For a brief comparison I shall mention that the presence of fine-fabric amphora-shaped jugs has been first recorded on sites from North-East Bulgaria in archaeological features dated to the end of the 8th century[43] and the beginning of the 9th century and that they ceased to be used in features from the first half of the 10th century[44].

In the 9th century, the three-lobed mouth of the single-handle jugs made of fine fabric became cylindrical for about half a century, probably under the influence and following the model of the amphora-shaped jugs. The change was not sudden and the transformation that probably started towards the middle of the 9th century was gradual and can be noted until the end of the 9th century and the beginning of the subsequent century, when single-handle fine-clay jugs with both reduction and oxidation firing disappeared from inventories and were initially replaced with fine fabric amphora-shaped jugs[45] and then by jugs made of kaolin-type or common clay with impurities. Potters returned to using three-lobed mouths in the second half of the 10th century. Such mouths are encountered in the case of jugs modeled out of fabric mixed with small-granulation sand (i.e. well-prepared fabric, not coarse) both with burnished decoration associated with incised decoration (in Dinogetia-Garvăn[46]) and with glazing. During the 11th–12th centuries both mouth types, three-lobed and circular (flared or cylindrical) were employed at the same time for single-handle jugs, indifferent of their fabric or size[47].

The end of the 9th century and the beginning of the subsequent century recorded on the sites from Dobrudja the sporadic appearance of the vessels made of kaolinitic-type clay, decorated with paint[48] (Pl. 2/1–5). The use of kaolin-type clays for the production of pots on the territory of Dobrudja was not novel, as they had also been employed during the Roman Period, as indicated by the discoveries from Castelu (pottery kiln and pits with discarded products)[49] and numerous other sites[50]. Kaolin-type clays have also been used during the Byzantine Period, starting with the 9th century and especially during the 10th–11th centuries, when their quantity increases in culture layers. During the latter chronological interval one can identify a period of circa one century when certain kaolin pots were ornamented with paint, as mentioned above. The preferred shapes for such decoration were pots with tubular handles, amphora-shaped jugs, pots without handless, and bowls with crushed-sphere-shaped body. The presence of such pots has been signaled in the settlements from Dinogetia-Garvăn[51], Noviodunum-Isaccea (Tulcea County)[52], Capidava (Constanța County)[53], Cernavodă (Constanța County)[54], Medgidia (Constanța County)[55], Valu lui Traian (Constanța County)[56], Murfatlar-Basarabi (Constanța County)[57], Constanța[58], Rasova (Constanța County)[59], Păcuiul lui Soare (Constanța County)[60], as well as in the settlements created in the castellum along the stone vallum[61], the necropolis in Castelu (Constanța County)[62] etc. During the 10th century the painted pots included in this ceramic category became more numerous in the culture layer, thus constituting a chronological indicator[63]. Pots made of kaolin-type clay and decorated with paint are present in Capidava in the layers that can be dated to the ninth and 10th century, until 969[64]. In Dinogetia-Garvăn they feature sporadically also in complexes dated with coins issued by Ioan Tzimiskes and Basil II (969–989)[65] but disappear in features from the end of the 10th century[66]. In Murfatlar-Basarabi such pots have been found in archaeological contexts from the second half of the 10th century[67]. In Păcuiul lui Soare, a fortification built after the events of 971[68] in which most of the early medieval discoveries were made in habitation layers dated to the 11th century[69], the number of such pots becomes very small[70].

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[41] Ștefan *et al.* 1967, 200–201.

[42] Ștefan *et al.* 1967, 196.

[43] Hristova 2015, 103–104, Tab. 3, 118.

[44] Dončeva-Petkova 1977, 77–78, 106, Fig. 33 6.

[45] Comșa 1963, 109.

[46] Ștefan *et al.* 1967, 167, 200.

[47] Ștefan *et al.* 1967, 186, 196, 230; Diaconu, Vîlceanu 1972, 90–91, Fig. 33/1–4, 93, Fig. 36/1; Cursaru-Herlea 2016, 153, 294, Fig. 178; Paraschiv-Talmațchi 2017, 272–273, Fig. 1/1.

[48] Comșa 1963, 109.

[49] Băjenaru 2018, 239–257.

[50] Barnea 1962, 359, footnote 1; Diaconu, Vîlceanu 1972, 88.

In the case of pots made of kaolin-type clay the body is fully or partially painted with red, yellowish-beige, coffee-brown, or brown paint; the decorative motifs have been traced with a brush and consist of vertical, horizontal, or oblique stripes, semicircles, or curls. Sometimes the paint strips were drawn after the surface of the vessel had been previously completely painted with a lighter color. Some of the items display a painted decoration associated with incised elements, in which cases the painted motifs were applied subsequent to the incised motifs, overlapping them. The incised decoration consists of horizontal lines, rarely wavy, while on amphora-shaped jugs one also encounters grooves set apart or pricks made with some sharp object. Kaolin pots remained part of the early medieval repertoire during the subsequent century as well, though they were ornamented with incised elements or glaze.

Pottery with olive-green glaze was added to the ceramic inventory during the 10th century. The introduction of this type is generally associated with the return of Dobrudja to the administration of the Byzantine Empire[71], but in Capidava[72], Poarta Albă[73], and Medgidia[74] a discreet presence have noted also before the events during the time of John Tsimiskes[75]. Starting with the last two decades of the 10th century glazed pots became a mandatory component of the pottery in the Istro-Pontic territory. These are present on all of the sites with habitation layers dated to the 10th–12th centuries. We remember the discoveries from Nufăru (Tulcea County)[76], Tulcea[77], Dinogetia-Garvăn[78], Hârşova[79], Capidava[80], Cernavodă[81], Oltina (Constanţa County)[82], Păcuiul lui Soare[83], Murfatlar-Basarabi[84], Valu lui Traian[85], Constanţa[86] etc. They were mostly made of common clay, well-prepared and cleaned, but one also encounters items made of kaolin-type clay. Glazed pottery was mostly burned in oxidation atmospheres, completely or only to a shallow depth, but there are also pots with reduction burned or uneven reduction firing, with reddish spots.

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[51] Ștefan *et al.* 1967, 163–165, Fig. 100–102; Comșa 1968, 377.

[52] Barnea 1962, 360; Diaconu, Vîlceanu 1972, 86.

[53] Florescu *et al.* 1958, 173, 179, 205, Fig. 109/1–4; Florescu 1958, 131–139.

[54] Unpublished material preserved in the collection of the MINA Constanța.

[55] Harțuche 1971, 252–253.

[56] Unpublished material from the MINA Constanța.

[57] Barnea, Bilciurescu 1959, 550–553, Fig. 15/4, Fig. 16/2; Barnea 1962, 357–360, Fig. 6/1-5.

[58] Cârjan 1969, 387, Fig. 5; Paraschiv-Talmațchi 2018, 8, Pl. 3/12–13.

[59] Scorpan 1968, 367–372, Fig. 23 a–c, Fig. 24 a–c.

[60] Diaconu, Vîlceanu 1972, 85, Fig. 32.

[61] Comșa E. 1957, 333; Damian 2015, 137–138.

[62] Comșa *et al.* 1962, 655–656; Rădulescu, Harțuchi 1967, 90–91.

[63] Comșa 1963, 111; Diaconu, Vîlceanu 1972, 86.

[64] Florescu *et al.* 1958, 173; Florescu 1958, 131; Scorpan 1968, 375; Cursaru-Herlea 2016, 144.

[65] Ștefan *et al.* 1967, 200.

[66] Ștefan *et al.* 1967, 201.

[67] Barnea 1962, 360.

[68] Diaconu, Vîlceanu 1972, 23.

[69] Diaconu, Vîlceanu 1972, 53.

[70] Diaconu, Vîlceanu 1972, 85, mentioning only two fragments discovered before the publication of the first volume of the monograph.

The earliest shape decorated with olive-green glaze (also the shape preferred throughout the 10th–12th centuries) is that of jugs, mostly amphora-shaped ones, but this glaze was relatively soon also applied to pot and starting with the 11th century also mug, bowl, cup, dish, but in a very small percentage, rarely flask and patella[87]. Among the glazed pots dated to the 10th century and the beginning of the subsequent century one notes items modeled on the slow-turning potters' wheel[88]; the transition to their modeled exclusively on the fast-turning potters' wheel making during to the first quarter of the 11th century[89]. During the 10th century the glaze was mostly olive-green, ranging from nuances of light to dark olive-green. At the time of discovery display a shiny or a dull shine, sometimes with reddish or brownish hues. The glaze had been applied directly to the body of the vessels, without a support layer of engobe. I tend to attribute to the same period the items with olive-green glaze and yellow stripes created by drawing wide engobe lines before glazing; such pots are rare on the sites from Dobrudja[90] (Pl. 3/2–6) and have analogies in Bulgaria[91] (Pl. 3/7–8). The surface of jugs dated to the 10th century and the beginning of the subsequent century is usually just glazed, rarely in association with other types of decoration such as veins created during modeling on the neck, shoulder or body, or horizontal grooves[92] (Pl. 3/1).

11th–12th centuries vessels display richer decorations, with elements incised or applied before glazing. Besides pots with olive-green glaze, starting with the second half of the 11th century one encounters items with light green, orange, white, or yellowish-white glaze, rarely polychrome[93] (Pl. 3/11–12.15), present on small vessels or dishes. The richest decoration we find on the medium-sized jugs, where almost no part of the vessel was omitted. On the body they display incised horizontal or wavy lines, short oblique lines, simple circles (Pl. 3/9) or circles with a dot in the center, notches and grooves, or pricks made with the teeth of pottery combs. The applied decoration makes the ceramic with glazed to stand out even more. One encounters horizontal girdles, arches, vertical and semi-circular moldings, conical prominences, flattened pills etc.[94] (Pl. 3/10.13). One often notes the association of incised and applied motifs on one and the same pot. The handles of jugs sometimes display modeled decorations in the upper part, consisting of moldings starting from the handle and continuing upwards vertically on the neck, a flat or concave disk, and tall vertical knobs[95]. Zoomorphic or anthropomorphic depictions were rarely applied to the handle, shoulder or body of jugs and pots (Pl. 3/14), or parts of jugs have been stylized to suggest an animal[96]. As exceptions one can mention among the discoveries two pots, one in the shape of a bird[97] and the other in the shape of a boot[98].

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[71] Diaconu, Vîlceanu 1972, 104; Damian 2015, 139.
[72] Florescu *et al.* 1958, 170, Fig. 99, 206–207; Cursaru-Herlea 2016, 188
[73] Diaconu, Vîlceanu 1972, 104, footnote 57.
[74] Unpublished material from the collection of the MINA Constanţa.
[75] Comşa 1963, 111.
[76] Damian *et al.* 2007, 118; Damian 2015, 139 and footnote 627.
[77] Vasiliu, Mănucu-Adameşteanu 1984, 149, Pl. XXI/5.
[78] Ştefan *et al.* 1967, 230–249.
[79] Paraschiv-Talmaţchi 2017, 271–278.
[80] Florescu *et al.* 1958, 205–207; Cursaru-Herlea 2012, 329–343; Cursaru-Herlea 2016, 153–157.
[81] Barnea 1960, 77, Pl. I/4–7.
[82] Paraschiv-Talmaţchi 2017, 278–281.
[83] Diaconu, Vîlceanu 1972, 89–102.
[84] Barnea 1962, 361–362, Fig. 7.
[85] Unpublished material from the collection of the MINA Constanţa.
[86] Paraschiv-Talmaţchi 2018, 8.
[87] Barnea 1962, 362; Ştefan *et al.* 1967, 230, 234; Diaconu, Vîlceanu 1972, 89–102; Cursaru-Herlea 2016, 152–157; Paraschiv-Talmaţchi 2017, 271–281.
[88] Diaconu, Vîlceanu 1972, 104–106; Cursaru-Herlea 2012, 332; Paraschiv-Talmaţchi 2017, 272, 279.
[89] Diaconu, Vîlceanu 1972, 104–106.
[90] In Hârşova (Paraschiv-Talmaţchi 2017, 273, Fig. 1/19), Capidava (Cursaru-Herlea 2016, Pl. XXIX/185), Oltina (Paraschiv-Talmaţchi 2017, 274, Fig. 2/6), Constanţa and Valu lui Traian (unpublished material from the collection of the MINA Constanţa).
[91] Dončeva-Petkova 1977, 188, 210, Pl. XXVI/315.
[92] Ştefan *et al.* 1967, 232; Cursaru-Herlea 2012, 333–334.

In the second half of the 10th century the ceramic repertoire of Dobrudja was enriched with new shapes that are to be included in the preexisting types. Thus, bowls in the shape of a flattened sphere (also called tureens)[99], with more or less in-turned rims, present in the ceramics category of fine paste (Pl. 1/10–11) during the chronological interval delimited by the end of the 8th century and the 9th century[100], and encountered during the 10th century in the category of kaolin pottery decorated with paint[101] (Pl. 2/4), disappeared from inventories and was replaced by tronconic bowls[102]. The latter were modeled out of common and kaolin-type clays, had straight or slightly in-turned rims, and were decorated with incised motifs (Pl. 2/6–10). Glazed items of this type are also encountered during the 11th century,[103] but to a rather small degree. The transition between the centuries also marks the introduction of cauldrons with horizontally flattened rims and bitronconic body[104] that during the 11th century became a mandatory component of early medieval pottery in Dobrudja, with a good frequency in the culture layer (Pl. 2/11–12). They replaced the early shapes[105] that resembled pots without handles, had spherical body, flared rim, and inner perforations on the level of the neck.

The presence of ceramics with micaceous engobe on a site can also be a chronological indicator. Pottery with micaceous engobe is made out of well cleaned fabric and was fired in oxidation atmosphere. It stands out through its slightly shiny outlook rendered by the micaceous engobe (Pl. 5/1–7), golden or silver in color, that usually covers the entire body of the pots. Vegetal or geometric motifs were sometimes drawn in red paint on top of the engobe (Pl. 5/5). The engobe layer is not even and was only preserved in spots on some of the items. On a fragment from the settlement in Oltina[106] the golden engobe was observed under the microscope as it was only preserved on the edge and under the stripes of red paint.

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[93] Ştefan *et al.* 1967, 238–239.

[94] Ştefan *et al.* 1967, 232, 235, Fig. 144/9.13, 237, Fig. 145/11.22; Diaconu, Vîlceanu 93–97, Fig. 37–38.

[95] Ştefan *et al.* 1967, 232–234, Fig. 143/5.7.10, 237, Fig. 145/14.20–21.

[96] Vîlceanu 1962, 373–381; Ştefan *et al.* 1967, 235, Fig. 144/10; Diaconu, Vîlceanu 1972, 96–98, Fig. 39, 100, Fig. 42; Damian 1996, 187–194.

[97] Vîlceanu 1962, 381.

[98] Vasile 2010, 387–389.

[99] Comşa *et al.* 1962, 654–655, Fig. 4/8–9.

[100] Paraschiv-Talmaţchi 2014, 358 and footnote 40.

[101] Comşa *et al.* 1962, 655; Rădulescu, Harţuchi 1967, 90–91; Cârjan 1969, 387, Fig. 5, 391.

[102] Comşa 1963, 112.

[103] Ştefan *et al.* 1967, 236–237, Fig. 145/4–6.

[104] Florescu *et al.* 1958, 211; Ştefan *et al.* 1967, 204–204, mentioning the variations of the rims and of the perforated areas observed for the eleventh-twelfth centuries pots from the settlement in Dinogetia-Garvăn.

[105] Comşa *et al.* 1962, 655, Fig. 5; Ştefan *et al.* 1967, 201; Paraschiv-Talmaţchi 2014, 358–359 and footnote 41.

[106] Bugoi *et al.* 2018, 111 (sample O27).

In Dobrudja such discoveries have been recorded, at the current state of research, only in the settlements located along the line of the Danube, in Nufăru[107], Dinogetia-Garvăn[108], Hârşova[109], Capidava[110], Oltina[111], and Păcuiul lui Soare[112]. From a typological perspective, most of the items are jugs, but one also encounters pots with one handle, mugs, and a storage pot.

This ceramic category has a discreet presence in the Istro-Pontic territory and was only found, until now, in layers dated to the 11th–12th centuries, with a higher frequency in the 11th century[113]. In the settlement from Hârşova pottery with golden engobe was discovered inside a dwelling the inventory of which also included one Roman III coin, class B (1028–1034), the upper part of a spherical amphora, as well as fragments from pots without handless ornamented with the cog-wheel, a type of decoration mostly employed during the 11th century[114].

Specialists considered until not long ago and almost without exception that pottery with golden engobe was only present in layers dated to the 11th–12th centuries, that it was introduced starting with the period of Byzantine domination over the Bulgarian territories, and that it was no longer used starting with the beginning of the 13th century[115]. The recent discoveries made in Bulgaria in a medieval settlement from Thracia, in the region of Chirpan, have revealed pots with micaceous engobe dated to the 8th–10th centuries[116].

Pottery with micaceous engobe belonging to the period under analysis was discovered not only in Bulgaria[117] and Romania, but also in Serbia[118] and Turkey[119]. Still, the highest quantity can be noted in Bulgaria. I mention the fact that in Dobrudja (in Dinogetia-Garvăn[120] and Pantelimonu de Sus[121]) and in Istanbul (Saraçhane[122]) pottery with micaceous engobe has also been signaled in layers dated to the 5th–6th centuries.

The presence of amphorae on a site is a good chronological indicator. The discoveries made so far have confirmed five large typological groups in Dobrudja[123]: I – oblong-conical amphorae (Pl. 4/1); II – spherical-shaped amphorae (Pl. 4/2); III – pear-shaped amphorae with collar (Pl. 4/3–4); IV – pear-shaped amphorae with heightened handles (Pl. 4/5); V – spherical-shaped amphorae with a short neck and heightened handles (Pl. 4/6). For clarification, I should mention the fact that groups II–V are equivalent to groups I–IV Günsenìn[124]. These large groups can be further divided into subtypes, sometimes intermediate phases between groups dated in succession or set chronologically apart. For example, the group of spherical-shaped amphorae also includes subtype I–IV Günsenìn. Pear-shaped amphorae with collar also include two subtypes, according to the height of the handles as compared to the rim: IIIa amphorae with the handles lower than the rim (Pl. 4/3) and IIIb amphorae with the handles higher than the rim (Pl. 4/4). Group IV, that groups pear-shaped amphorae with heightened handles, also includes two subtypes, according to the intermediate types I–III Günsenìn and II-III Günsenìn, while the group of spherical-shaped amphorae with a short neck and heightened handles includes subtype IVf Günsenìn.

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[107] Baraschi 1989, 190–192, Fig. 5–6.
[108] Ştefan *et al.* 1967, 271–272, Fig. 164/4.11.
[109] Paraschiv-Talmaţchi 2011, 103–105, 113–114, Pl. II–III.
[110] Cursaru-Herlea 2016, 168–171, 297, Pl. XXXI.
[111] Bugoi *et al.* 2018, 111–114.
[112] Diaconu, Vîlceanu 1972, 113–114, Fig. 49–50.
[113] Baraschi 1989, 195; Paraschiv-Talmaţchi 2011, 107.
[114] Paraschiv-Talmaţchi 2011, 107.
[115] Baraschi 1989, 195–196; Borisov 1989, 219–220; Paraschiv-Talmaţchi 2011, 107.
[116] Koleva 2018, 155–156.
[117] Borisov 1989, 215–220, with more pot types than in Dobrudja; Borisov 1992, 188–193; Stereva, Manolova 2001, 54–64; Dončeva-Petkova 2015, 196.
[118] Bikić 2016, 563–569.
[119] Hayes 1992, 49.
[120] Ştefan *et al.* 1967, 272.
[121] Unpublished material from the collection of the MINA Constanţa. Unpublished information provided by Mr. Constantin Băjenaru, whom we thank. Pottery with micaceous engobe from Pantelimonu de Sus (Constanţa County), that I saw, displays a relatively similar though not identical look of the engobe.
[122] Hayes 1992, 49.
[123] Paraschiv-Talmaţchi 2016, 136.
[124] Günsenìn 1989, 267–276; Günsenìn 1990, Fig. 3 (including the intermediate types).

The general chronological identification of the five groups is[125]: I – the 10th century (-twelfth?)[126]; II – the second half of the 9th century – the 11th century (subtype I-IV is considered a late variant[127] that was used until the second half of the 11th century[128]); III – the end of the 10th century – the 11th century (IIIa is mostly encountered during the first half of this period); IV – the 12th–13th centuries (but intermediate types I–III and II–III are from the 11th century[129]); V – the 12th–13th centuries, rarely also found in layers dated to the beginning of the 14th century, even the beginning of the 15th century.

At the current stage of research, the only of a single discovery from Dobrudja can be included in the first group. The item in question was found in Sinoe Lake[130], a former gulf of the Black Sea. Similar discoveries are mentioned from sites on the northern of the Black Sea (Taman Peninsula) for the first half of the 10th century, and in Bulgaria (Preslav) where they are dated to the second half of the 10th century[131].

The earliest dating of group II amphorae is to the second half of the 9th century[132], but such items were widely spread during the second half of the 10th century and the first half of the 11th century. Spherical-shaped amphorae have a wide area of distribution, being discovered in Pontic and Adriatic centers, in cities around the Aegean Sea and the Marramara Sea, in port-cities on the Danube and settlements from the continental area[133]. The spherical-shaped amphorae discovered in Dobrudja fit the general chronological interval, with the mention that they have a higher frequency in the fortified centers restored after the year 971.

The amphorae of group III appear at the end of the 10th century and were much more frequent during the subsequent century. Items included in subtype IIIa are rarely mentioned individually in existing publications, being generally analyzed together with subtype IIIb and similarly dated. The distribution area of pear-shaped amphorae with collar includes centers from the northern, western, and southern shores of the Black Sea, port-cities along the Danube, settlements from the continental area[134] etc. Pear-shaped amphorae with collar have a good frequency in the sites of Dobrogea in the 11th century.

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[125] Paraschiv-Talmațchi 2016, 136.

[126] Ștefan *et al.* 1967, 266; Dončeva-Petkova 1977, 103, 195.

[127] Ștefan *et al.* 1967, 251.

[128] Günsenìn 1990, Fig. 3.

[129] Günsenìn 1990, Fig. 3.

[130] Paraschiv-Talmațchi, Custurea 2015–2016, 248, 271, Pl. I/2, 274, Pl. IV/1.

[131] Dončeva-Petkova 1977, 195, 212, Pl. XXX/369; Čhaidze 2008, 151–152, Fig. 83.

[132] Iakobson 1951, 335; Barnea 1954, 516; Bakirtzis 1989, 74; Günsenìn 1989, 270–271.

[133] Iakobson 1951, 333, Fig. 6/27, 335; Barnea 1954, 516; Ștefan *et al.* 1967, 249–250, 252, Fig. 154/1; Barnea, Ștefănescu 1971, 261; Barnea 1973, 308, 317, Fig. 15/7; Dončeva-Petkova 1977, 193–194, 212, Pl. XXX/356, 358; Vasiliu, Mănucu-Adameșteanu 1984, 148, 544, Pl. III/5, 550, Pl. IX/5; Bjelajac 1989, 113; Bakirtzis 1989, 74, 77; Günsenìn 1989, 270–271; Vasiliu 1991, 379; Balabanov 1992, 155, Pl. V/1, 166; Vasiliu 1996, 173; Henning 2007, 686, no. 141, Pl. 12/141; Damian *et al.* 2007, 118, 146, Fig. 23; Čhaidze 2008, 154–155; Yashaeva *et al.* 2011, 611, no. 378; Stănică 2012, 55; Paraschiv-Talmațchi 2016, 130–136.

[134] Barnea 1959, 907; Čangova 1959, 256, Fig. 10; Ștefan *et al.* 1967, 257, 259, 260, Fig. 159/1, 263, Fig. 161; Barnea, Ștefănescu 1971, 266; Vasiliu 1980, 442, 445–446; Vasiliu, Mănucu-Adameșteanu 1984, 144–146, 148, 544, Pl. III/6, 546, Pl. V/1, 550, Pl. IX/4, 554, Pl. XIII/3; Günsenìn 1989, 271; Balabanov 1992, 155, Pl. V/2–3, 166; Dončeva-Petkova 1992, 131, 134, Fig. 22/a–⊠; Vasiliu 1996, 173, 185, Pl. V/7; Iotov, Atanasov 1998, 74–75, Fig. 62, Pl. LXV/1, 8; Zelenko 2000, Fig. 1/1–4; Damian *et al.* 2007, 118, 147–148, Fig. 24–25; Henning 2007, 686, no. 142, Pl. 12/142; Todorova 2011, 165.

As previously mentioned, group IV amphorae are specific to the 12th and 13th centuries. The area of discovery is generally similar to that of the previous group (the northern, western, and southern shores of the Black Sea, port-cities along the Danube, settlements from the continental area), but are also encountered on sites from Italy[135]. In Dobrudja, pear-shaped amphorae with heightened handles fit the general chronological interval, but are also mentioned in earlier layers. For example, in Dinogetia-Garvăn they feature in archaeological contexts dated with coins between 1081 and 1143[136].

Group V amphorae are characteristic to the 12th–13th centuries, but their late variants also feature in layers from the 14th century, even the beginning of the 15th century[137]. Their presence was also mentioned in the centers from the northern, western, and southern of the Black Sea, the port-cities along the Danube and those in continental area[138]. In Dobrudja, spherical-shaped amphorae with short neck and heightened handles have a more discrete presence[139].

During the 11th–12th centuries one also notes the presence of jugs and pots of better quality (Pl. 5/8–14), modeled on the fast-turning potters' wheel out of well-processed common clay (a single item is made of kaolin-type clay) with oxidation firing. Their handles, one or two, are flat in section and start from the area of the neck or from the rim. In the case of some jugs the handle displays an upper ramification (Pl. 5/10). The decoration on these pots is varied. In the case of jugs it often covers a large part of the body (*horror vacui*). Among the decorative motifs mention veins and wavy stripes, finely incised, suggesting arches, placed in the area of the neck. Alveoli, wavy stripes, horizontal stripes consisting of lines, grooves, or short oblique lines, finely incised, were placed on the shoulder. Rarely the shoulders of these pots are delimited from the rest of the body with a strong step. Some jugs have a relief girdle in the lower half of the body, decorated with alveoli, a row of alveoli, a step, or a stripe consisting of horizontal incised lines. These elements can close a decorative row delimited in the upper part by a wavy stipe and containing, at even distances, vertical indentations that look like folds (*Faltenkrug*). In the case of pots, sometimes jugs as well, the decoration consists of a wavy stripe placed under the shoulder that contains burnished oblique or vertical lines. Such pots have been discovered in Nufăru[140], Tulcea[141], Dinogetia-Garvăn[142], Capidava[143] etc.

An overview of the data provided by the archaeological discoveries indicates that on the early medieval sites from Dobrudja there are ceramic categories and types that can be constituted in chronological benchmarks (Pl. 6) and that can contribute to the definition of the relative chronology of certain complexes, layers, and even sites. This is possible due to the transformations within the ceramic categories and types over time. We refer to the progressive changes determined by the addition of new elements to an existing model and the introduction of new shapes or characteristics that had not been previously encountered in the area under analysis, representing innovations or influences which most often have a short period of existence. One notes for example the transformation of the mouth of jugs made of fine fabric, with one handle and three-lobed mouth, used during the 8th–9th centuries, that became cylindrical in the second half of the 9th century.

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[135] Čangova 1959, 256–257, Fig. 11; Barnea, Ştefănescu 1971, 267; Günsenìn 1989, 271, 273–274, Fig. 8–11.

[136] Barnea, Ştefănescu 1971, 266.

[137] Iakobson 1951, 340–341; Bakirtzis 1989, 74; Günsenìn 1989, 276; Yashaeva *et al.* 2011, 614, no. 383; Todorova 2011, 166–167.

[138] Iakobson 1951, 340–342; Barnea 1954, 522; Čangova 1959, 257, Fig. 12; Ştefan *et al.* 1967, 267, Fig. 159/2; Bakirtzis 1989, 74, 75, Fig. 6; Bjelajac 1989, 113–115, Fig. 3; Günsenìn 1989, 274–276, Fig. 13–14; Günsenìn 1990, Fig. 3; Zelenko 2000, 6, Fig. 4; Yashaeva *et al.* 2011, 614, no. 383; Todorova 2011, 167.

[139] Ştefan *et al.* 1967, 267, Fig. 159/2; Stănică 2012, 63, 79, Fig. 8; Paraschiv-Talmaţchi 2016, 137.

[140] Cursaru-Herlea 2016, 163 and footnote 745.

[141] Vasiliu 1980, 441, Pl. II/2.

[142] Ştefan *et al.* 1967, 268–274, Fig. 165; Vasiliu 1991, 375, Pl. IV/7.

[143] Cursaru-Herlea 161–168, Pl. 30/190.

Though the change probably reflected the needs of the users at certain times, such jugs disappeared from inventories in the end of the 9th century and the beginning of the subsequent century, being replaced by amphora-shaped jugs, of fine clay, and by jugs made of kaolin-type clays or common clay with impurities.

At other times, the shapes of a certain ceramic category were adopted by another, a process probably determined by technological changes, correlated or independent from the era's "fashion". For example, the model of amphora-shaped jug made of fine fabric, with reduction or oxidation firing, with a trapezoidal protuberance at the base of the handle, present in layers dated to the 9th century and the beginning of the subsequent century in Dobrudja, is also encountered during the 10th century but made out of kaolin-type fabric and with the body covered with paint. Such a situation has been observed in the settlement from Pantelimonu de Sus (dated between the end of the 8th century and the first part of the 10th century[144]). We observe a transfer of the respective shape between two ceramic categories, at a chronological moment (the 10th century) when the category of fine-fabric pottery, existing for about two centuries, cede the market to the category of pots made of kaolin-type clays, which appeared for several decades. There have been several transfers between the two categories: flattened-spherical-shaped bowls, pots with tubular handles, and amphora-shaped jugs are shaped adopted by the category of kaolin pottery with paint from the repertoire of the fine-fabric pottery.

Besides, amphora-shaped jugs are a type that survived in the ceramic repertoire throughout the period under analysis, but has also recorded the most numerous transformations. It appeared in the first half of the 9th century in the category of fine-fabric pottery, mainly decorated with burnished motifs, associated with or independent from elements that were incised, marked in relief during modeling, or applied. The archaeological contexts of Dobrudja indicate that fine-fabric amphora-shaped jugs were gradually abandoned in the course of the 10th century, with few exceptions (Dinogetia-Garvăn), replaced with amphora-shaped jugs made out of kaolin-type clays decorated with paint and common clay. In their turn, towards the end of the 10th century amphora-shaped jugs made out of kaolin-type clays, decorated with paint, were replaced with glazed types modeled out of clean common clay and kaolin fabric, already present in the ceramic repertoire of that century, but with a lower frequency during the co-existence period. Glazed jugs from the 10th century and the beginning of the subsequent century usually display a simple glazed surface, rarely with elements in relief created during modeling or with grooves. Unlike these, the jugs of the 11th–12th centuries, mainly the average-size ones, are richly decorated through incisions or with elements applied before glazing.

As for the fabric, one notes that during the 8th–10th centuries they pots were made out of common clay, rather coarse, or fine. Coarse fabric was used throughout the entire period under analysis and fine-fabric pots were abandoned during the 10th century. Starting with the 9th century part of the pots was made out of kaolin-type clays, but its use as primary material was not a common occurrence. During the 10th–11th centuries one notes an increase in the frequency of pots made out of kaolin-type clays. On some sites such items represent up to 25–30 % of all ceramic finds. This primary material was gradually abandoned starting with the middle of the 11th century[145]. Returning to common clay, one notes that starting in the 10th century and especially during its second half and the first decades of the subsequent century some pots were made out of well-cleaned and well-processed fabric (such as glazed pots, for example), not only coarse fabric. This improvement of the common clay represents one of the reasons why some pots have been interpreted for a long time as mainly imports.

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[144] Paraschiv-Talmaţchi 2014, 359.

[145] Ştefan *et al.* 1967, 202.

The decoration techniques, the way in which the decorative motifs were associated, the introduction or disappearance of certain elements that beautify the body of the pots can also contribute to the elaboration of viable chronological elements, as previously shown, stressing yet again the contribution that pottery can have to establishing the relative chronology of sites, especially those lacking discoveries with more precise chronological value (elements of jewelry and dress accessories, coins, seals etc.).

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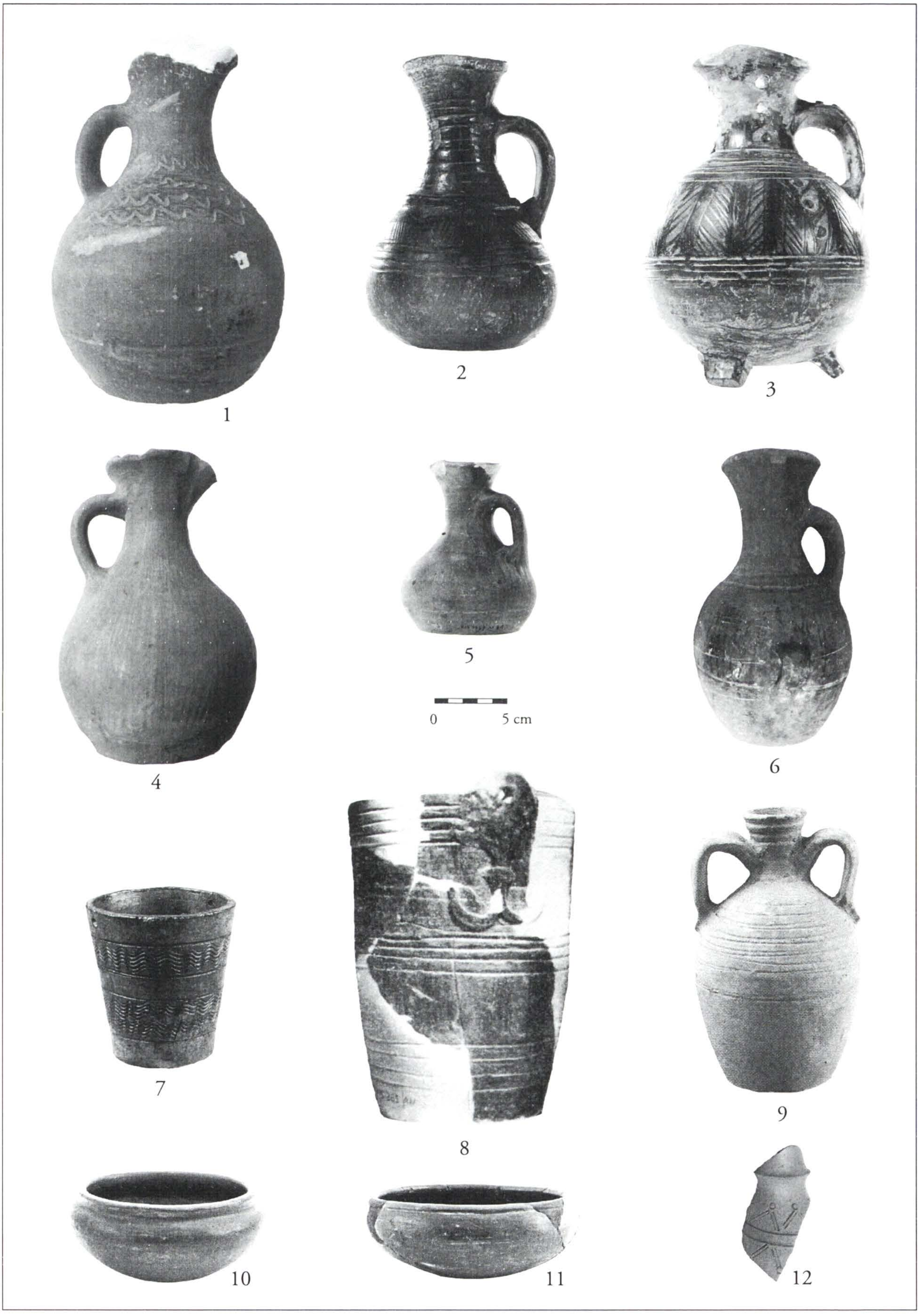
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Plate 1. Fine-fabric pottery discovered at the Lower Danube.

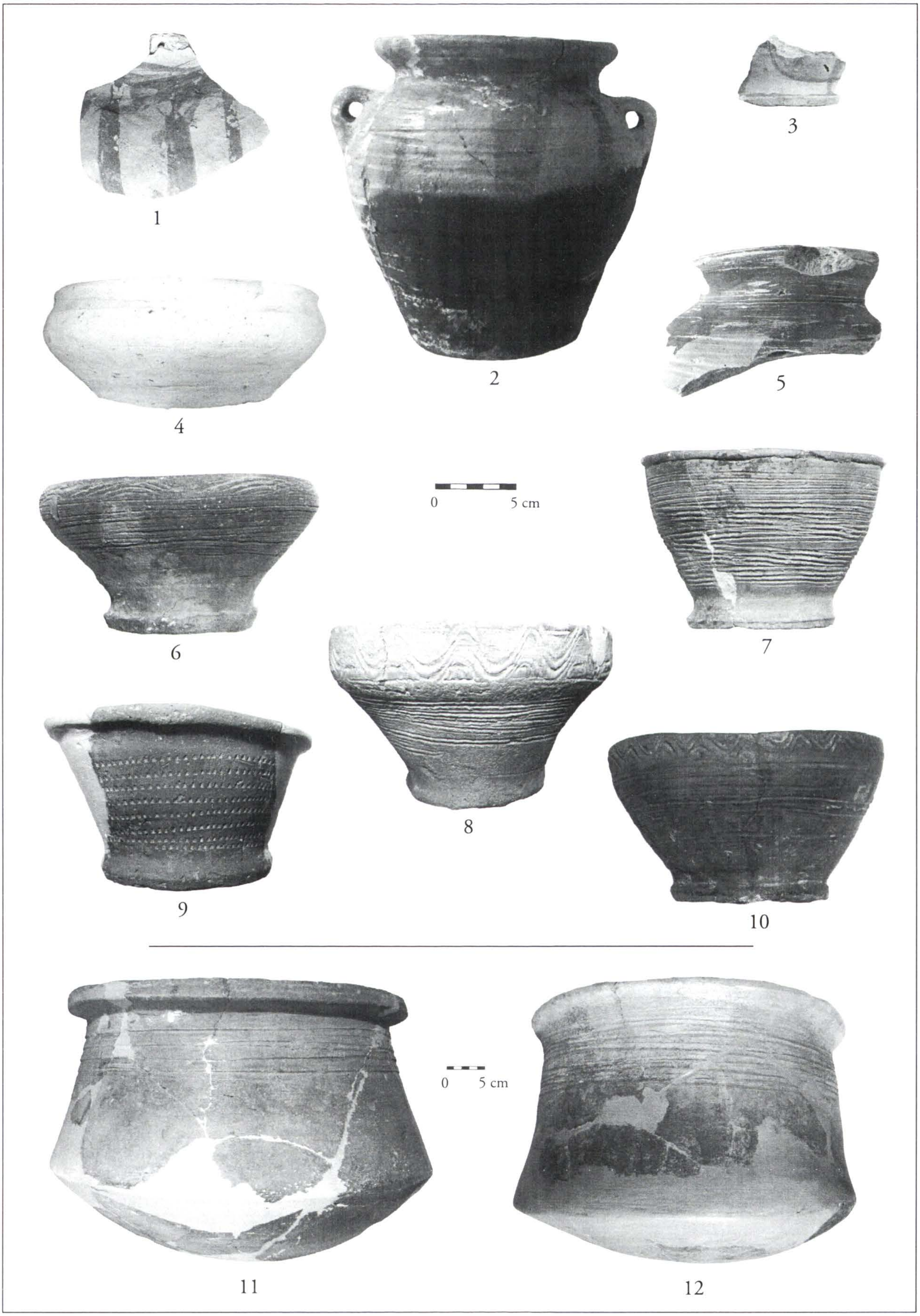
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Plate 2. Kaolinitic-type clay decorated with paint (1–5), bowls (6–10) and cauldrons (11–12)

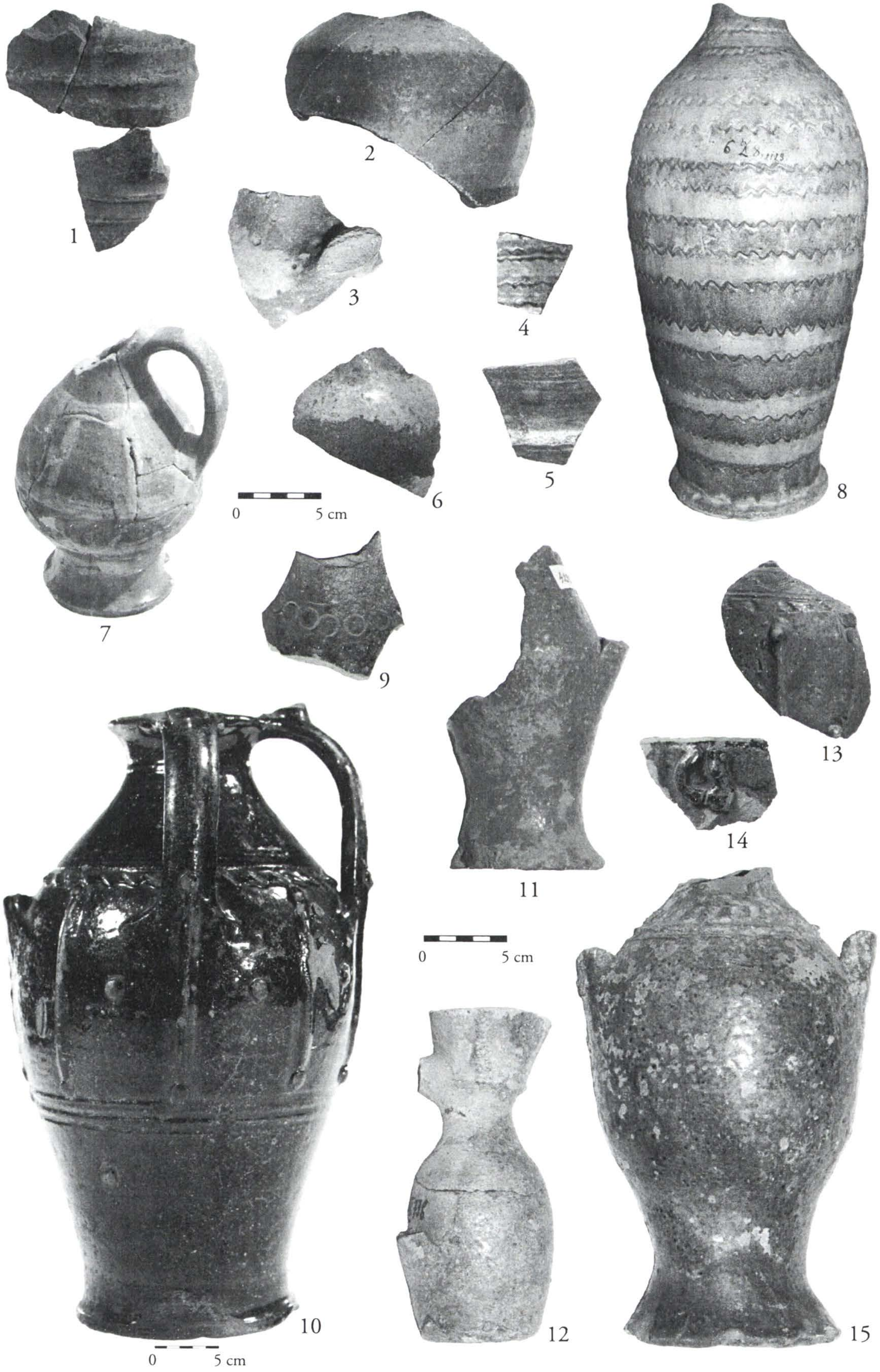
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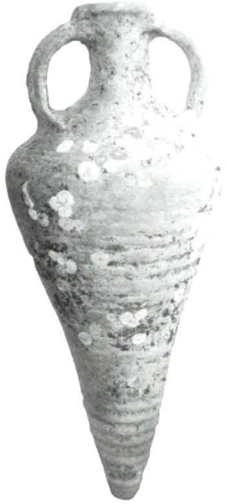
Plate 3. Potttery with glaze discovered at the Lower Danube.



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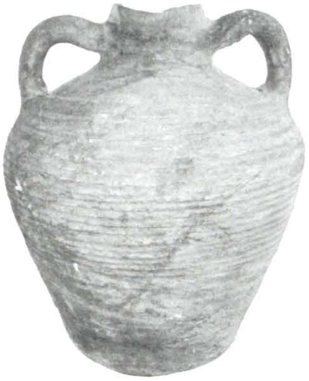

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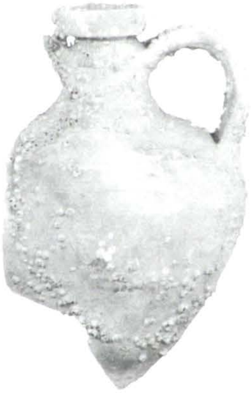

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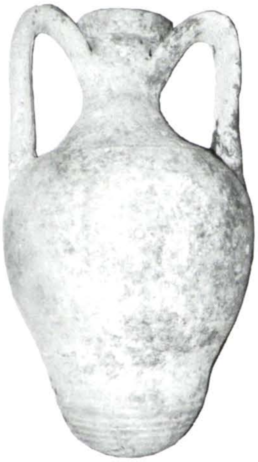

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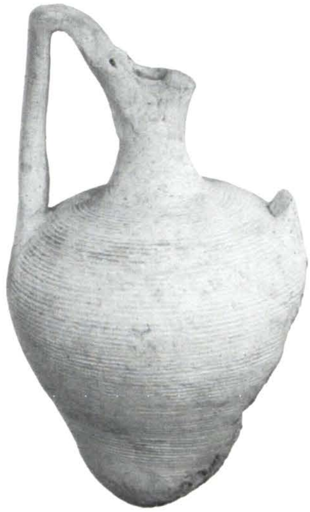

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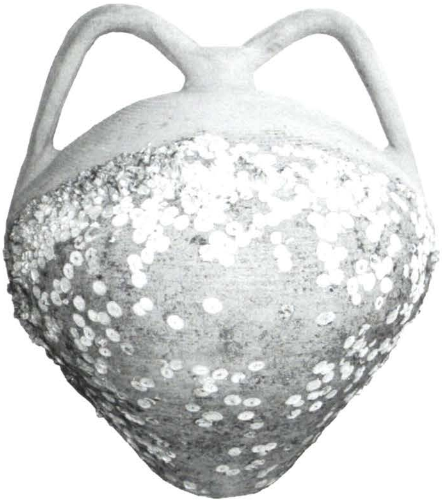

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Plate 4. Amphorae discovered in Dobrudja.

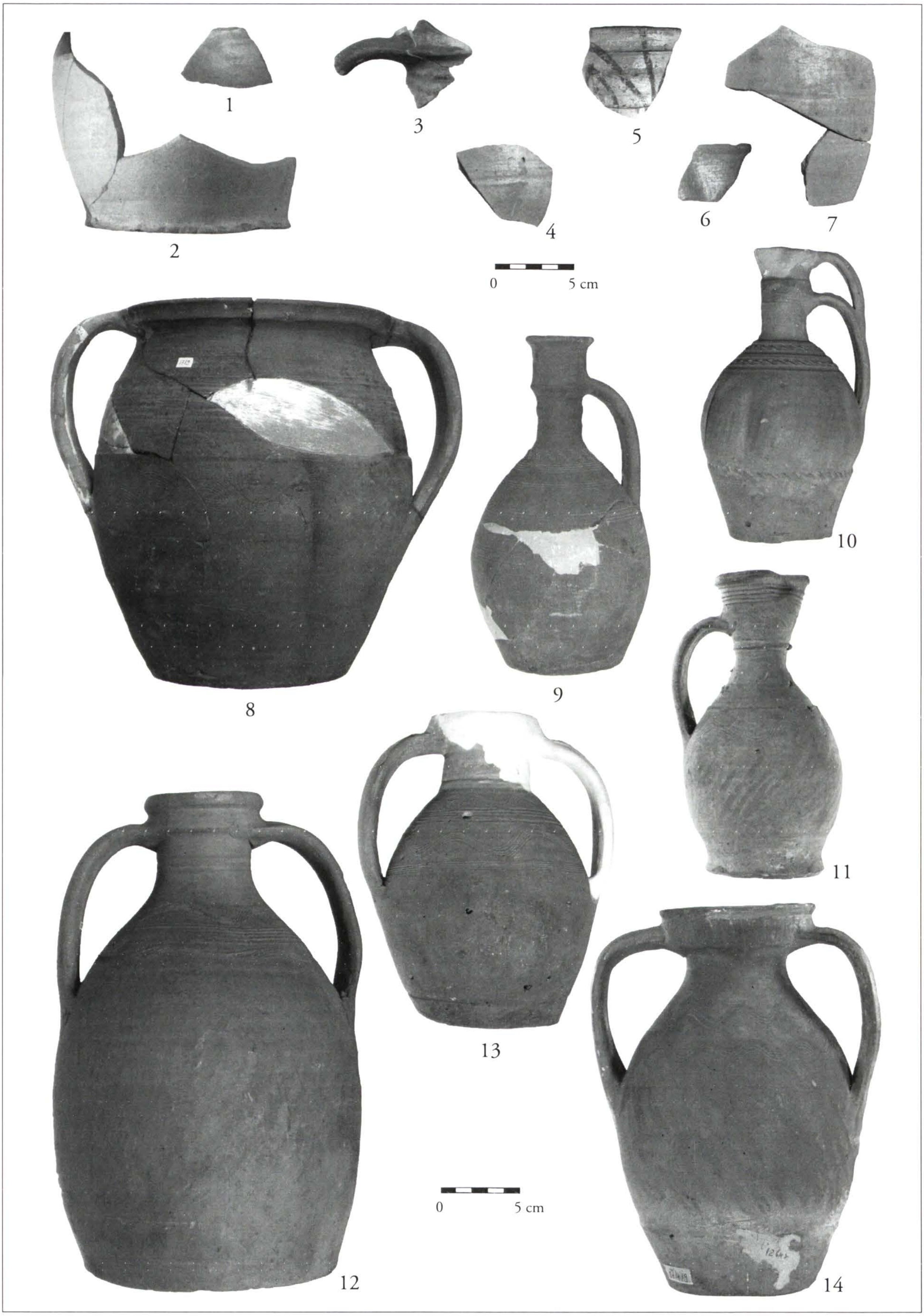
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Plate 5. Ceramics with micaceous engobe (1–7) and pottery of better quality (8–14) discovered in Dobrudja.

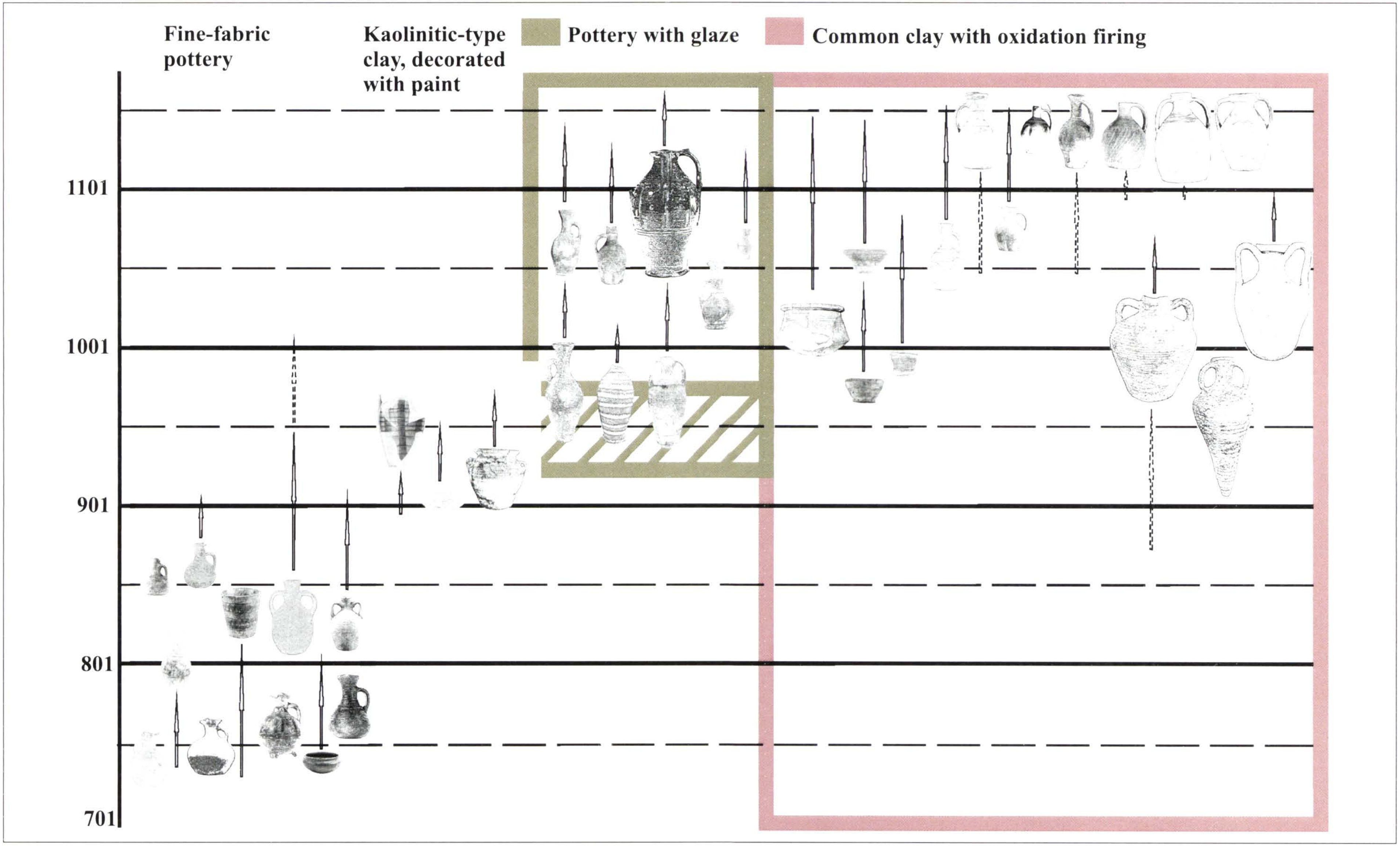

Plate 6. Chronological scale with ceramic categories and types.

The Relative Chronology of the Early Medieval Settlement in Susani "Sălişte" (Timiş County) from the Perspective of the Discovered Pottery*

Daniela Tănase

Abstract: *On the occasion of the preventive archaeological excavations carried out in 2012 on the Lugoj – Deva highway route to Susani–Saliște (Traian Vuia municipality, Timiș county), an early medieval settlement was partially investigated, being discovered houses, pits with household waste and pits from which the clay was extracted. The chronology of the settlement was established strictly on the basis of ceramics, vertical stratigraphy observations being impossible. The archaeological material collected is little numerous, being represented in overwhelming proportion by the pottery (thrown at the slow-turning wheel, at the fast-turning wheel, and handmade). With the help of the discovered ceramics it was established that this settlement has two habitation phases, the first from the 7th to 8th centuries and the second from the 8th to 9th centuries. It is worth noting that in the second phase there are fragments of vessels worked on the fast wheel.*

Keywords: *Early Medieval settlement, pottery, relative chronology.*

The archaeological situation. An early medieval settlement was researched in 2012 on the occasion of preventive archaeological excavations performed on the route of the future Lugoj–Deva Highway, on Site 2 – km 21+050 located on the spot called "Sălişte", on the border of the village of Susani, part of the municipality of Traian Vuia. Naturally, the site was only partially researched, over an area covering 12.500 square meters (250 × 50 m). Archaeologists have documented 115 features, of which the most relevant are 13 dwellings, one household refuse pit, and nine clay extraction pits. The other features are post holes, tree holes, drainage ditches, animal dens, and natural alveoli (Pl. 1).

No stratigraphic observations were possible regarding the relations between the researched features, as the soil was removed in the area down to the identification level of the archaeological features in the sterile soil. There have been rare cases of intersecting pits, but these were contemporary features. Nevertheless, on the basis of the collected archaeological material, small in quantity and consisting overwhelmingly of pottery, the team was able to identify chronological differences between some of the researched features. Only 24% of the features could be dated with certainty. Three of them (9.5%) date to the 7th–8th centuries[1] and 25 (91.5%) were created and used during the 8th–9th centuries[2].

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* English translation: Ana Maria Gruia.

[1] According to the *Preventive Archaeological Research Report. Lugoj-Deva Highway Site 2 – km 21+050, Susani Village, Traian Vuia Municipality, Timiș County* preserved at the National Museum of Banat in Timișoara (further *Report*), dwelling no. 13/C112 and household pits no. 8/C88, no. 4/C58, and no. 15/C115 date to the 7th–8th centuries.

[2] According to the same report dwellings no. 1/C5, no. 2/C6, no. 3/ C24, no. 4/ C27, no. 5/C38, no. 6/C44, no. 7/ C65, no. 8/C74, no. 9/C80, no. 10/C85, no. 11/ C86, no 12/C99 and household refuse pits no. 1/ C18, no. 2/ C26, no. 3/ C39, no. 4/ C58, no. 5/C64, no. 6/C66, no. 7/ C84, no. 9/ C90, no. 10/C94, no. 11/ C95, no. 12/ C98, no. 13/ C100, no. 14/ C102 date to the 8th–9th centuries.

The following features are the most relevant for the chronology of the settlement and shall be discussed below in detail: dwelling no. 13/C112 (Pls. 3–4) and household pits no. 4/C58 (Pl. 2A) and no. 8/C88 (Pl. 2B) that belong to the early phase (7th–8th centuries), and dwellings no. 1/C5 (Pl. 4 and Pl. 5A) and no. 8/C74 (Pl. 5B) from the late phase (8th–9th centuries).

Description of the archaeological features[3]. The early phase of the settlement – the 7th–8th centuries. Dwelling no. 13/C112 was oval in shape, covering an area of approximately 5 m², with adobe walls. The soil filling of the pit contained numerous pottery fragments, the majority modeled by hand (Pl. 3/1–5,9; Pl. 4/1.8–9; Pl. 8/1,4), only a few modeled on the slow-turning potters' wheel (Pl. 3/8 and 8/2), fragments of clay pans (Pl. 4/2–7 and 8/6a–b), a small crucible (?) made of clay (Pl. 3/6), a clay "bread", fragmentarily preserved (Pl. 3/7), as well as a fishing net weight, made of clay, red in color, cylindrical in shape, perforated in the middle[4]. The pottery modeled by hand had been created out of coarse fabric with inclusions of gravel that make it look gritty, and is yellowish, reddish or brown in color. One pot fragment has notches on the rim and a round orifice on the neck, probably so that it could be hanged (Pl. 3/9 and 8/1). The clay pan fragments are modeled out of two types of fabric – one coarser, with gravel and crushed shards in its composition, and the other finer, with a lot of sand in its composition. These fragments are yellowish-brown or reddish-brown in color. The pottery modelled on the slow-turning potters' wheel was made out of semi-fine fabric, red, yellowish and brown in color, decorated with straight lines (Pl. 3/8 and 8/3), wavy lines or both, combined.[5]

Pit no. 4/C.58, with household refuse remains, was almost round in shape (2.04 × 2.08 m), measuring 1.36 m in depth. From its fill the archaeologists have recovered pottery fragments and animal bones. The pottery fragments belong to pots made by hand out of semi-fine fabric with inclusions of gravel, yellowish or reddish-brown in color (Pl. 2A/2–3; Pl. 8/5a–c), as well as to pots modeled on the slow-turning potters' wheel out of semi-fine fabric, brown in color (Pl. 2A/1), yellowish on the outside and black on the inside, decorated with alternative stripes of straight and wavy lines[6].

Pit no. 8/C.88 with household refuse remains, round in shape (with the diameter measuring 2.20 m), 0.26 m in depth. The fill contained pottery fragments, adobe, and coal pigment. The pottery fragments made by hand had been modeled out of semi-fine fabric with inclusions of gravel, brick-red in color, and were once part of a large pot of which several pieces have been found (Pl. 2B/1). Fragments modeled on the slow wheel have also been found, made of semi-fine fabric, brick-red in color, some of which were decorated with straight lines (Pl. 2B/2–3 and Pl. 8/3)[7].

The late phase of the settlement – 8th–9th centuries. Dwelling no. 1/C5 was oval in shape (3.40 × 1.94 m), identified at the depth of 0.92 m. It covered a habitable area of 6.59 m² and had an open hearth, as indicated by rocks with traces of secondary firing. In the fill of this dwelling the team recovered pottery fragments, fragments of a hand mill made of volcanic tuff, adobe, two clay spindle weights, one of which is fragmentarily preserved (Pl. 5/9–10), one fragment from a sharpening stone (Pl. 6A/1), and animal bones with cut marks. Most of the pottery fragments have been modeled on the slow wheel out of fine fabric with mica, brown or brick-red in color, or made of fine fabric, brick-red or brown in color. The decoration is varied, consisting of stripes of straight lines, grooved lines, wave-type lines or combinations of wave-type lines and straight lines (Pls. 5/4–8 and 9/3–4). Some of the fragments were decorated with a row of oblique small lines created with the finger nail[8]. One should mention the fact that the dwelling also revealed one wall fragment from a pot modeled on the fast wheel out of semi-fine fabric, brown in color, with ribs on the inside[9].

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[3] I was unfortunately unable to find some of the pottery fragments discovered in this settlement that are thus not illustrated in the present study. The missing fragments are those found in dwellings L1/C5), L2/C6, L3/C24, L4/C27, L5/C38, L6/C44, L9/C80, L11/C86, L13/C112, and those from household refuse pits no. 2/C26, no. 4/C58, no. 7/C84, no. 8/C88, no.10/C94, and no. 15/C115. They feature in the illustration of the article published in Banatica 26, 2016, see Bozu *et al.* 2016, 358–361 Pls. V–VIII. The object fragments were also illustrated in the preventive excavation report completed in 2012 at the end of the excavations.

[4] The item is illustrated in *Report*, 127, Pl. LXXXVII/1.

[5] Bozu *et al.* 2016, 360 Pl. VII., 14–15, 21 and *Report*, 123 Pl. LXXXIII.

[6] Bozu *et al.* 2016, 361 Pl.VIII/11.

[7] Bozu *et al.* 2016, 361 Pl. VIII/17 – fragment decorated with straight lines, Pl. VIII/14–13 – undecorated fragments.

Dwelling no. 8/C74 was oval in shape (3.10 × 2.50 m), covering an area of 7.75 m², and measuring between 0.55 m and 0.80 m in depth. The fill of this dwelling revealed pottery fragments made on the slow and fast potters' wheels, adobe, an driver rocks. Archaeologists mainly found pottery fragments modeled on the slow wheel out of semi-fine fabric with gravel in composition, brown in color, decorated with straight lines or wave-type lines bordered by straight lines (Pl. 6B/2–3). There was also one fragment from a pot modeled on the fast wheel out of semi-fine fabric with inclusions of gravel that make it look gritty, grayish-brown in color. It displays one rib on the upper part (Pl. 6B/4 and Pl. 9/5a–b).

Pottery typology

Pottery made on the fast-turning potters' wheel. Pottery modeled on the fast wheel features in less than half of the settlements that can be dated to the 8th–10th centuries on the present-day territory of Romania, in much smaller quantity than the pottery modeled on the slow wheel[10]. This proportion is preserved in the settlement of Susani "Sălişte" as well. The site has revealed pottery fragments produced on the fast wheel out of semi-fine fabric, with gravel in its composition, rendering it gritty in outlook, brown or gray-brown in color, with grooves on the inside. These were usually atypical and only found in archaeological features that can be dated to the 8th–9th centuries, in association with pottery fragments modeled on the slow wheel.

This type of pottery items had kitchen-related used, thus in direct relation to fire[11], displaying traces of firing especially on the outside, that have rendered the pots blackish-brown in color. The shapes of the pots could not be identified, as only scattered fragments are available, but they were very likely handless cooking pots, average in size. Such fragments were found in dwelling no. 1/C5, in dwelling no. 8/C74, as well as in household refuse pit no. 2/C26.

The pot wall fragment found in dwelling no. 8/C74 is more interesting. It was made out of semi-fine fabric with inclusions of gravel that made it look gritty. It was grayish-brown in color and displayed a rib on the upper side. The fragment might belong to a handless pot. One can find a very close analogy in the settlement from Sacoşu Mare "Burău", located ca. 45 km from Susani, that revealed a pot fragment without decoration but with ribs, that was similar in shape[12]. Pottery modeled on the fast wheel out of gritty fabric, very similar to the pottery from dwelling no. 8 but with various shades of brick red, was also found in the pottery kiln from Sighişoara "Dealul Viilor" (Mureş County)[13]. Undecorated pottery made on the fast wheel was also found in the settlement of Ghenci "Lutărie" (Satu Mare County)[14]. Thus this type of pottery usually features in settlements from Transylvania and the western part of Romania.

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[8] Bozu *et al.* 2016, 358 Pl. V/2.

[9] The wall fragment is atypical, and for this reason it was not illustrated.

[10] Stanciu 2000, 141.

[11] Stanciu 2000, 127.

[12] Moroz-Pop 1979, 150 Pl. I/1.

[13] Spânu, Gáll 2016, 192 Pl. 2/10–12.14, 195 Pl. 5/42.46.48–49.58, 197 Pl.7.

[14] Stanciu 2000, 181 Pl. IV/5.

An interesting situation was recorded regarding common pottery made on the fast wheel out of gritty fabric, for kitchen-related purposes, during the 8th–9th/10th centuries. It has not been discovered on contemporary archaeological sites researched in Hungary, the area of the Lower Danube, or North Bulgaria, indicating its local production[15] in the central and western parts of Romania where such discoveries have been found. This is proven by the discovery of the pottery kiln from Sighișoara "Dealul Viilor", that is of the two-chamber, up-draught type, stoked from one side[16], dated to the 7th–8th centuries. The kiln also contained pottery made on the fast wheel, with oxidation firing[17].

In Banat, in the high plain and hilly area of the county of Timiș, archaeologists also found fragments of common pottery modeled on the fast wheel in settlements located relatively close to Susani "Săliște", i.e. in Jabăr "Cotun"[18] and Lugoj "Știuca"[19], as well as in Sacoșu Mare "Burău"[20]. One must nevertheless mention that these settlements only date until the 8th century[21] and thus the presence of such pottery in a settlement also dated to the 9th century attest the perpetuation of the tradition of producing common pottery made out of gritty fabric in this region of Banat.

Pottery made on the slow-turning potters' wheel. Is predominant in the settlement from Susani "Săliște". Such items feature in small numbers in the early habitation phase and in overwhelming proportions during the late habitation phase. There are also other differences between these two phases of habitation, not only the one regarding the quantity of pottery made on the slow-turning potters' wheel. One thus notes a technological difference: during the 7th–8th centuries were made out of semi-fine fabric with gritty outlook and oxidation firing, in various colors from yellowish-red to orange red. The decoration consists of incised lines and straight lines made with the potters' comb or brush, probably covering a wider area of the pot, not only in thin stripes (Pl. 2B/2–3; Pl. 3/8; Pl. 8/3). During the late habitation phase, that of the 8th–9th centuries, the pots were made out of semi-fin or fine fabric, usually with mica and sand in its composition. They show traces of incomplete oxidation firing, more rarely of complete oxidation firing. The color of the pots includes various shades of red, from yellowish red to brick-red, and shades of brown, from yellowish-brown to black-brown.

The decorative repertoire of the pots is much richer. One notes various depictions of wavy lines: individual or groups of such lines in narrow stripes, often combined with bundles of straight lines. In their turn, straight lines feature in narrow stripes or over wider areas, rendered harder or more finely. The decoration was incised with comb-like tools. Several fragments had been decorated with rows of oblique small lines, consisting of finger-nail impressions made in the wet clay[22]. Regarding the shape of the pots, only small and average-size handless cooking pots were identified. Their rims were slightly flared, rounded or flattened, rarely slightly deepened for better supporting the lid (Pl. 3/4; Pl. 8/2; Pl. 5/1; Pl. 9/1), while the bottoms of the pots are straight.

Hand-modeled pottery. Handmade pottery was only discovered in archaeological features from the early phase of the settlement. It was modeled out of coarse fabric with gravel inclusions that rendered it gritty in outlook, with oxidation firing and the color ranging from yellow to brick-red and brown. Pit no. 8/C88 has revealed a storage pit modeled out of semi-fine fabric, sandy, with pebbles in the composition, reddish-yellow in color. The quality of the pottery is much better than that of the other fragments of pots modeled out of gritty fabric. In pit no. 4/C58 archaeologists found fragments of pot bases with ring sole, possibly of small bowl (Pl. 2A/2–3; Pl. 8/5a–c). One of these pots is modeled out of finer fabric, with rare pebbles in composition, so that its aspect is not gritty; it displays traces of incomplete oxidation firing, rendering it reddish-yellow in color (Pl. 2A/2; Pl. 8/5a–c).

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[15] Stanciu 2000, 143, 145.

[16] Spânu, Gáll 2016, 177–185.

[17] Băcueț-Crișan 2017, 190–194, 204.

[18] Moroz-Pop 1993, 154–155.

[19] Atypical pottery fragments, modeled on the fast wheel, preserved in the storage rooms of the National Museum of Banat in Timișoara.

[20] Moroz-Pop 1979, 149–150.

[21] Tănase 2010a, 81.

[22] Bozu *et al.* 2016, 358 Pl. V/2, 359 Pl. VI/23, 362 Pl. IX/2, 363 Pl. X/2.

The following shapes have been identified: handles cooking pots, small and average in size, storage pots, bowls (?), and small clay pans. The discovered pottery fragments lack all decoration; a single pot fragment displays notches on the rim. This fragment also has an orifice right on the neck, probably where the pot was hanged. Notches started to appear on pot rims in the end of the 7th century, but were widely distributed especially during the 8th century[23], as one also notes from the discovery in Pecica "Est/Smart Diesel" (Arad County). Archaeologist found there a pot with notches on the rim, modeled by hand, in a grave dated to the 7th–8th centuries[24]. Pot bases have ring soles, sometimes suggested by a simple molding, but there are also straight basses.

Regarding the small clay pans found in dwelling no. 13/C 112, they can be dated, most likely, to the 7th–8th centuries, but no later than that considering their association with the pots decorated with notches on the rim. One should also mention here the fact that such pans were also discovered in the settlements of Lugoj "*Ştiuca*"[25] and Sacoşu "Mare Burău"[26], located relatively close to Susani "Săliște". Small clay pans used for various household chores start featuring in settlements from Transylvania during the 7th century and continued to be in use until the 10th century. Still, in Susani "Săliște" the use of small clay pans has not been documented in the second habitation phase, during the 8th–9th centuries.

Dwelling no. 13/C112 also revealed a small clay container, tronconic in shape, with wide mouth and rounded base (Pl. 3/6). This was probably a clay crucible that could have been employed in the melting of non-ferrous metals for jewelry[27], but it displays no traces of use. I mention the fact that such containers have also been found in Banat in the settlement of Remetea Mare "Gomila lui Pituț"[28].

The chronology of the settlement. In the archaeological features researched in the settlement of Susani "Săliște", the discovered archaeological material preponderantly consists of pottery fragments and, in very rare cases, of highly corroded iron objects: an arrowhead (?) in dwelling no. 2/C 6, a tool fragment (?) in pit no. 5/C 64, and a knife fragment in pit no. 15/C 115. Archaeologists also found spindle weights in dwelling no. 1/C5, a fishing net clay weight in dwelling no. 13/C112, and fragments of a sharpening stone in dwelling no. 1/C5 and pit no. 15/C115.

Still, neither of these objects can be used as chronological indictors as, on the one hand, they are highly corroded and their use is uncertain and on the other hand they are common objects that cannot be dated with certainty to clear time periods. The arrowhead (?) alone might have provided some clues, but it is strongly corroded so that the type of items is rather a presumption. Thus, the only elements that can help in the dating of the archaeological site in Susani "Săliște", and even pottery is, unfortunately, dated to a rather wide interval: the 7th/8th – 9th centuries.

One should also discuss the round object made of gritty fabric, gray in color, incised, found in dwelling no. 13, that could be a round clay "bread". The diameter of such items usually varies between 2 and 8 cm, and their thickness between 1 and 2.3 cm[29], so that the item under discussion can be included in this series, based on the fact that its preserved diameter measures 3 cm. Still, one knows of larger "breads" as well, with diameters between 7 and 14 cm, especially in settlements in north-west Romania[30]. These "breads" are especially present in 6th–7th centuries settlements[31], but they can also be encountered in settlements dated to the 8th–9th centuries[32] so that the presence of the item in question in the late phase of the settlement in Susani "Sălişte" is not necessarily surprising.

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[23] Vida 1999, 138–142.

[24] Mărginean 2017, 165 Pl. 3/5.

[25] Tănase 2010a, 90 Pl. III/7.

[26] Moroz-Pop 1979, 152, 154 Pl. IV/3.

[27] Crucibles feature in settlements dated to the 6th-7th centuries: see Tănase 2010b, 133–135, but also those date to the 9th-10th centuries: Teodor 1996, 30.

[28] Bejan 1995, 71.

The "breads" in question were usually found around the ovens inside the dwellings, so that they have been interpreted as having magic-religious functions[33]. It is thus believed that such items were clay variants of the breads and dough knot-shaped breads and symbols of the food the deceased needed to reach the afterworld, but they could have also had the role of protecting the home and the family and ensuring their prosperity[34]. The discovery of such an item in Susani "Săliște" is significant, even if it cannot be considered a chronological indicator, as it provides a clue as to the spiritual life of this settlement's inhabitants.

One should also mention the fishing net clay weight, cylindrical in shape, measuring ca. 7 cm in length, found in dwelling no. 13/C112[35]. Such items have been found in the area of the settlements dated to the 7th–8th centuries and have been interpreted as beads. Still, considering their length and analogies with similar items from Medieval Era discoveries, some authors believe they are rather fishing net weights[36].

Thus, the chronology of the settlement in Susani "Sălişte" has been established on the basis of pottery alone, as no stratigraphic observations could be made due to the removal of the soil down to the level of identification of the archaeological features in the sterile soil. On the basis of the analogies for the discovered ceramic vessels, it seems that this settlement was contemporary, during its earlier phase, with the settlements in Jabăr "Cotun" and Sacoșu Mare "Durău", dated to the 7th–8th centuries, as well as the one in Lugoj "Știuca Veche", dated to the 8th century. All of them are located in the same region, by the feet of the hills around Lugoj.

Still, the great majority of the archaeological features discovered in Susani–Sălişte date to the 8th–9th centuries, preponderantly containing pottery modeled on the slow-turning potters' wheel out of fine and semi-fine fabric, usually with inclusions of mica, with a decorative repertoire specific to the later period. Surprisingly, nevertheless, no handmade pottery fragments have been documented during the second habitation phase of the settlement in Susani "Săliște". The coexistence of the two types of pottery during the 8th–9th centuries is documented in the era's settlements such as the one in Timişoara "Fratelia" where archaeologists found handmade pottery in small proportion as compared to pottery modeled on the slow-turning potters' wheel[37].

During the later habitation phase, the situation documented in the settlement of Susani "Săliște" regarding both the types of archaeological features and especially the archaeological materials, is similar to that in several settlements located in the area of Lugoj and some of the villages around the city, researched during infrastructure works performed in 2008–2012[38]. I should also mention the fact that in Gătaia “Valea Begului” (Timiş County)[39] archaeologists found three dwellings that can be dated to the 8th–9th centuries. One of them was endowed with open hearths and the other two with ovens made of river rocks that have also revealed pottery similar in nature to the one from the second habitation phase in Susani “Sălişte”. Another settlement dated to the 8th–9th centuries where archaeologists found open hearths and pottery fragments modeled on the slow wheel both of fine and gritty fabric, with oxidation firing, is the settlement in Timişoara “Fratelia”[40].

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[29] Stamati 2000, 363.

[30] Stanciu 1998, 219.

[31] Stanciu 1998, 215–224.

[32] Stamati 2000, 364–365.

[33] Stanciu 1998, 225.

[34] Stamati 2000, 371–374; Stanciu 2011, 301–308.

[35] I was unable to find the item again, so I have estimated its dimensions based on the photograph illustrated in the *Report*.

[36] Cosma 2002, 114–115.

[37] Bejan 1983, 355.

[38] The results of these researches have not been yet published and the materials are preserved in the storage rooms of the National Museum of Banat in Timișoara.

One should also mention the fact that 11 dwellings with pottery similar to the one in Susani “Sălişte” have been documented in the 8th–9th centuries settlement on the banks of the Danube, in Gornea (Caraş–Severin County), on the spots of Căuniţa de Sus and Zomoniţa. The site in Susani “Sălişte” thus dates to the same historical period.

Thus, the second habitation phase in Susani “Sălişte” dates to the 8th–9th centuries, but I believe it did not reach the 10th century, as it is a cultural horizon lightly different and somewhat earlier than that of the settlements in Remetea Mare “Gomila lui Pituţ” (Timiş County)[41], Sânandrei “Oxenbrickel” (Timiş County)[42], and Dumbrăviţa (Timiş County)[43] that can be dated between the second half of the 9th century and the first half of the 10th century[44].

The settlement in Susani “Sălişte” enriches the archaeological environment of the second half of the first millennium AD in Banat and, together with the other sites identified and researched especially after the year 2000, it provides a clearer picture of what happened in the beginnings of the Middle Ages in these territories.

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[39] Mare 2004, 95–96.

[40] Bejan 1983, 355–359.

[41] Bejan 1986; Bejan 1995, 70–76.

[42] Bejan 1995, 80–83.

[43] Tănase 2004, 38–42, 157–163 Pls. XXVII–XXXIII.

[44] Tănase 2010a, 84.

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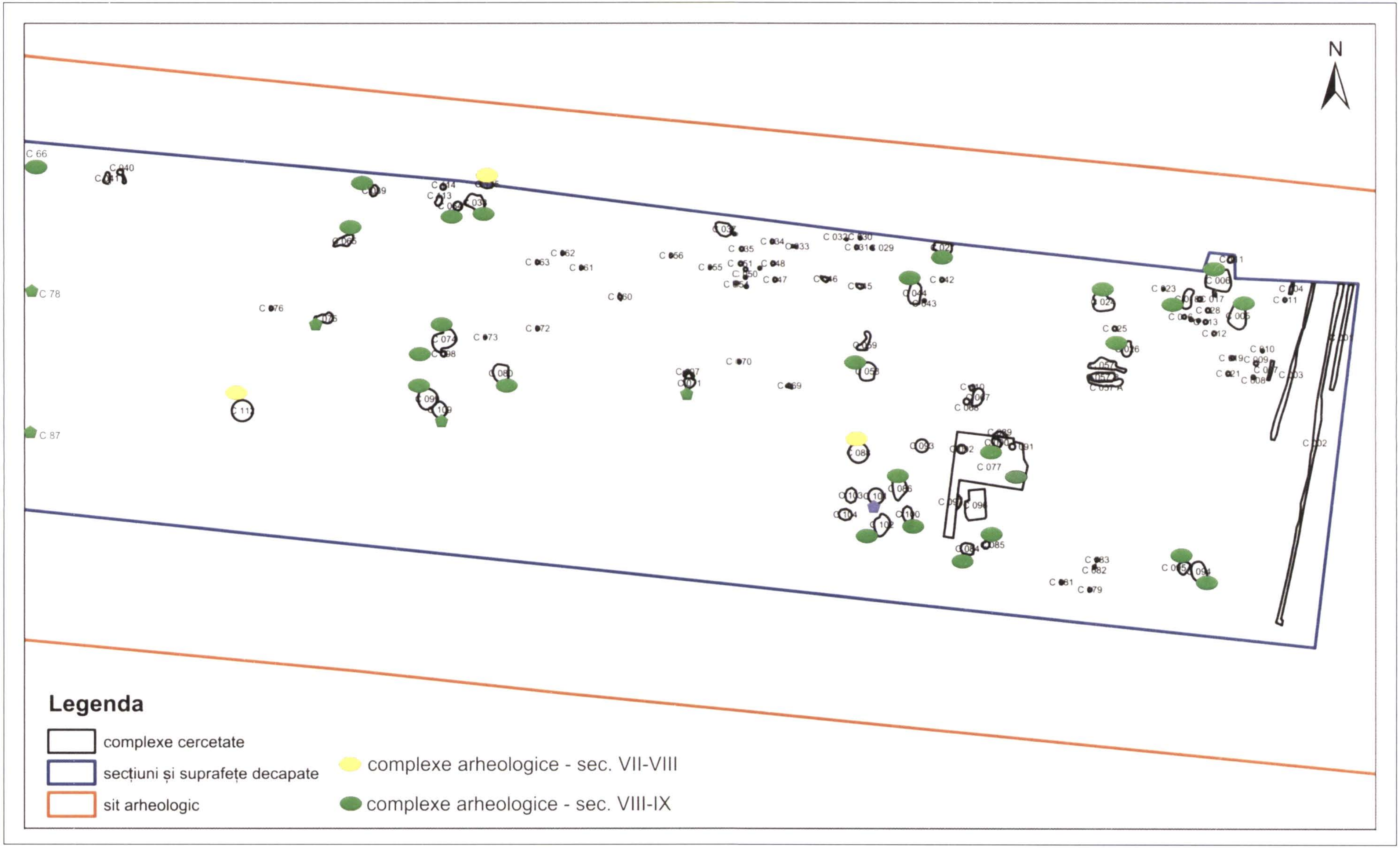
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Legenda
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complexe arheologice - sec. VIII-IX

Plate 1. Lugoj-Deva Highway, lot 1, Site 2 - km 21+050 - 21+250 / Susani - Săliște. General ground plan of the excavations - detail; scale: 1:400.

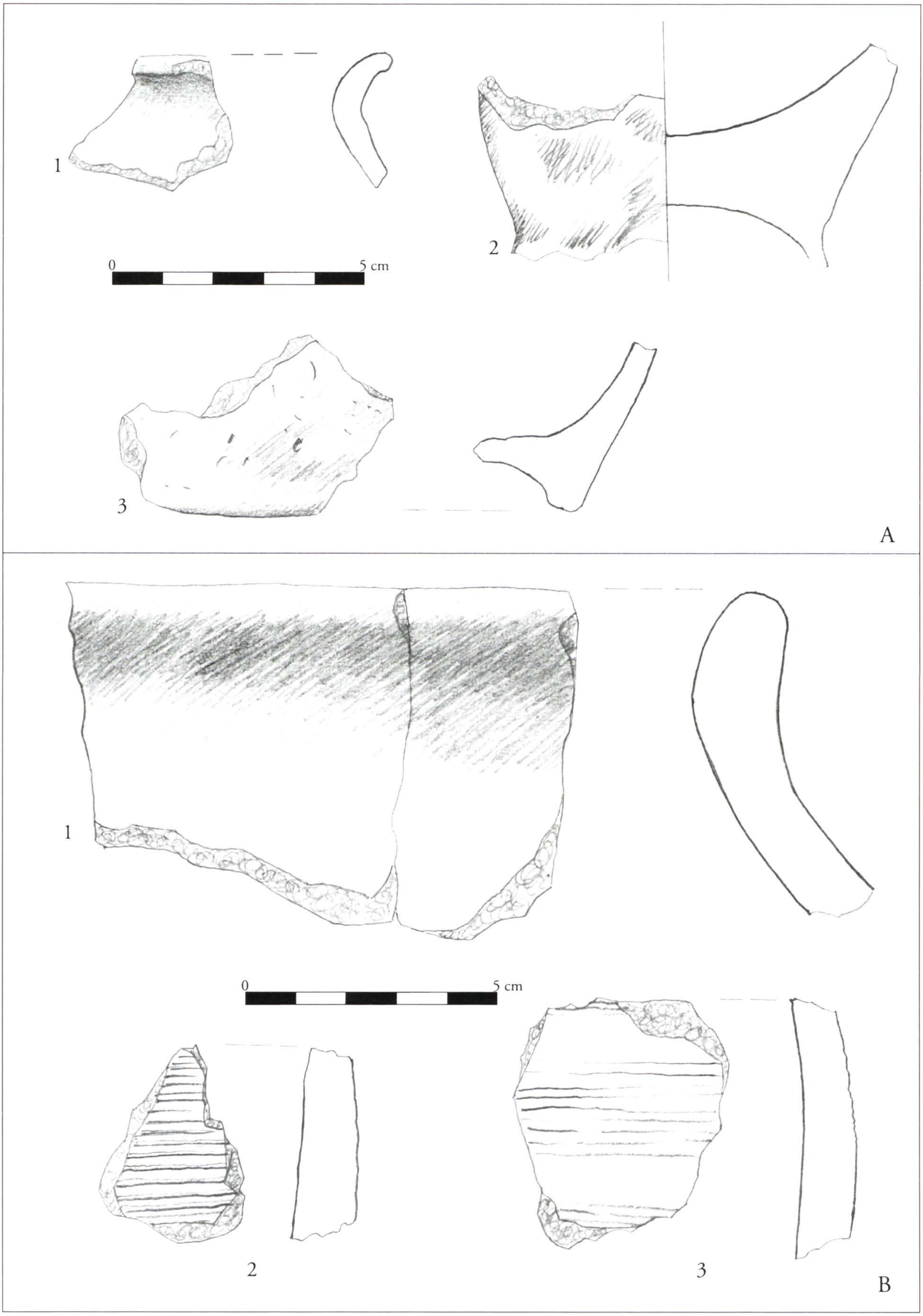
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Plate 2. Pottery fragments discovered in household pits no. 4/ C58 (A) and no. 8/C88 (B) (7th–8th centuries).

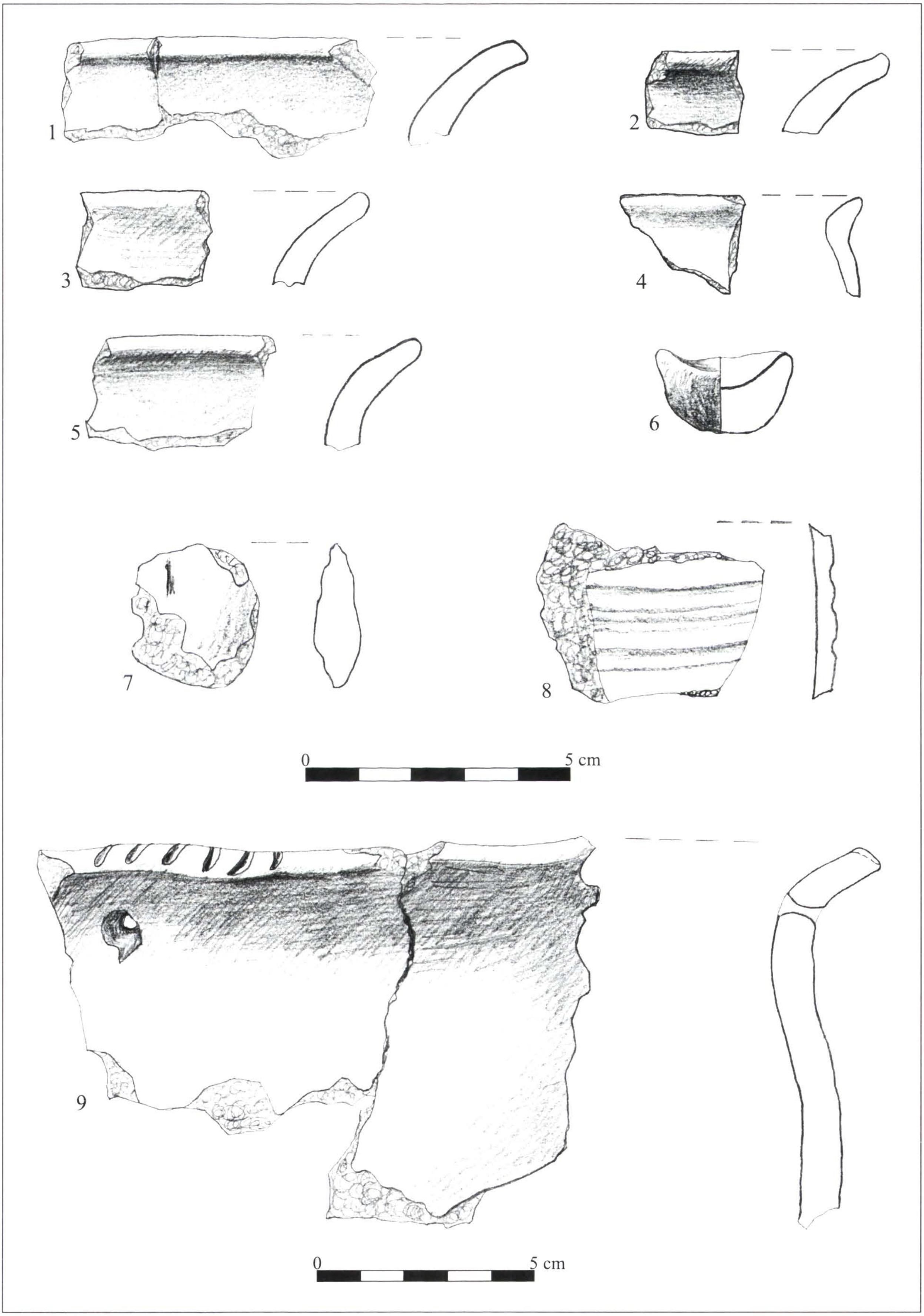

Plate 3. Pottery fragments (1–5, 8–9), crucible (6), and clay "bread" (7), discovered in dwelling no. 13/C112 (7th–8th centuries).

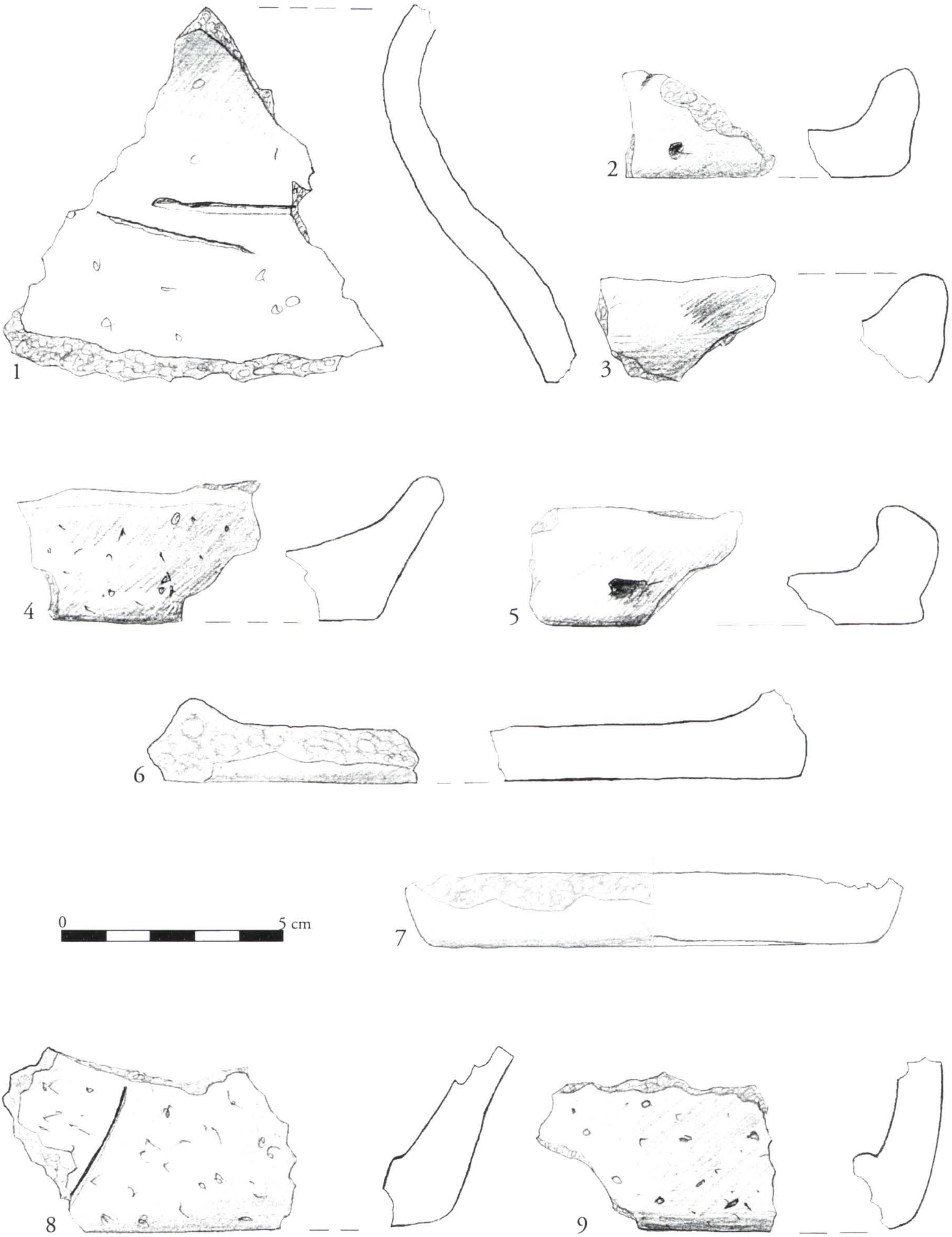
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Plate 4. Pottery fragments (1, 8–9) and fragments of clay pans (2–7), discovered in dwelling no. 13/C112 (7th–8th centuries).

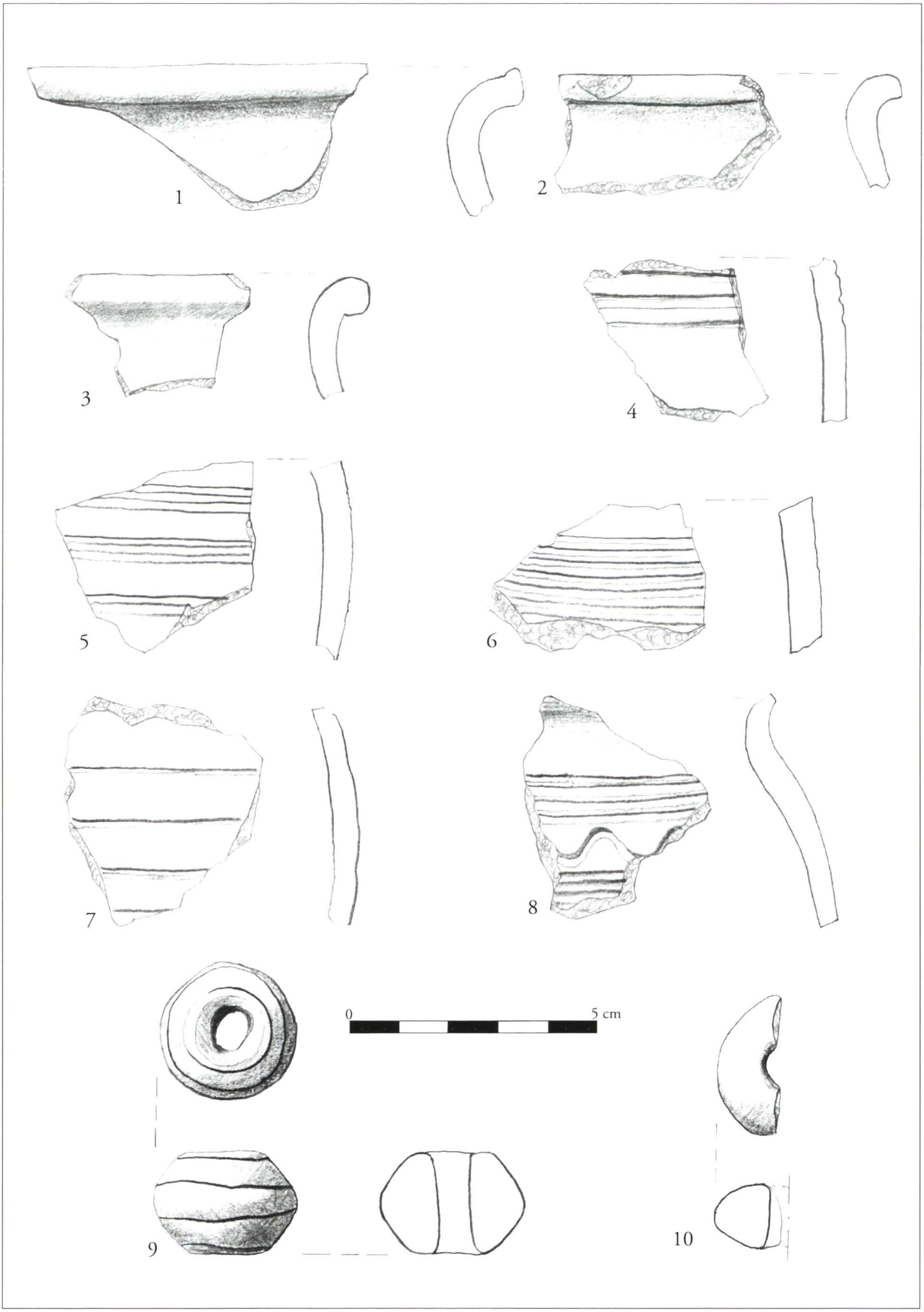

Plate 5. Pottery fragments (1–8), clay whorls (9–10), discovered in dwelling no. 1/C5 (8th–9th centuries).

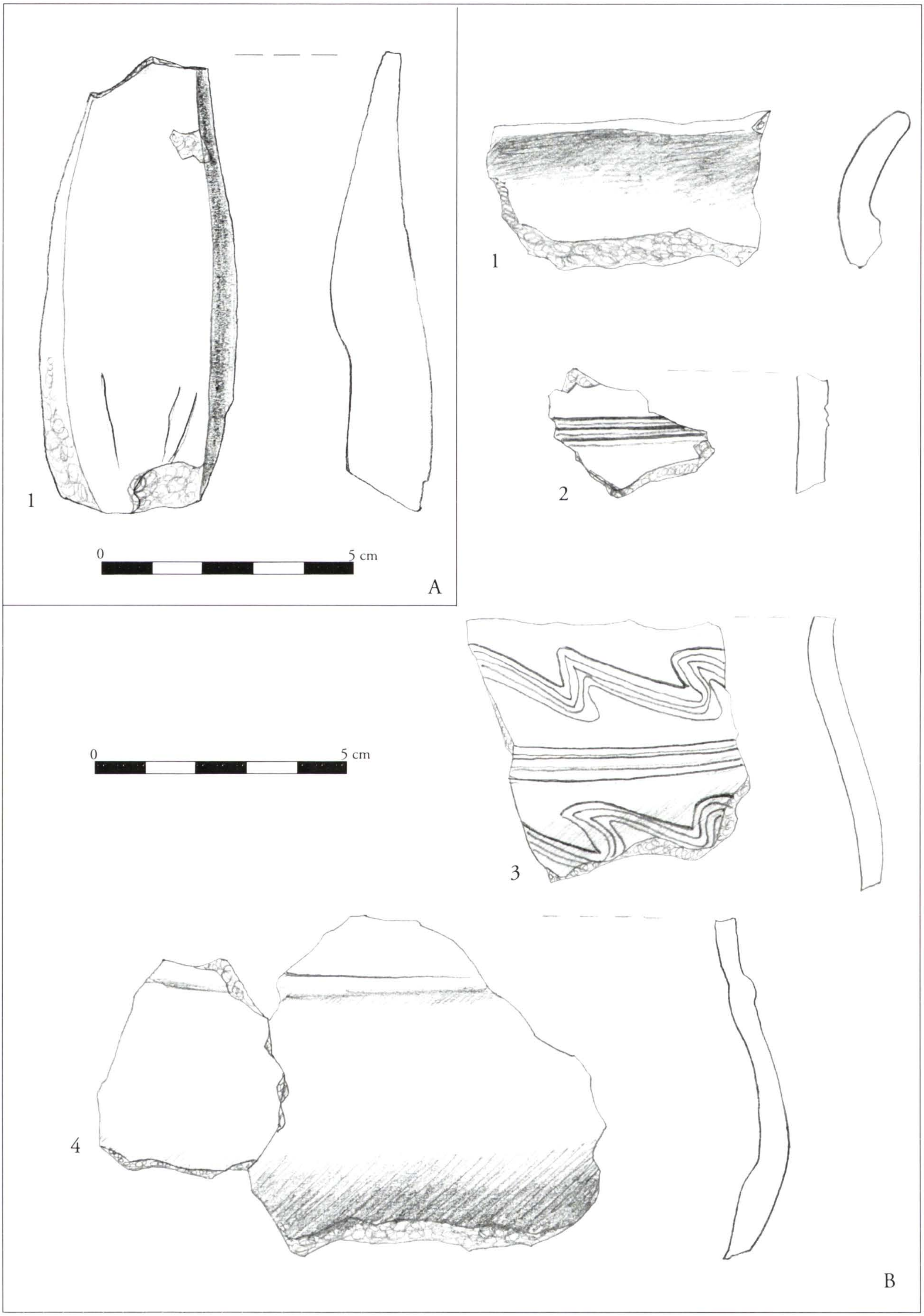
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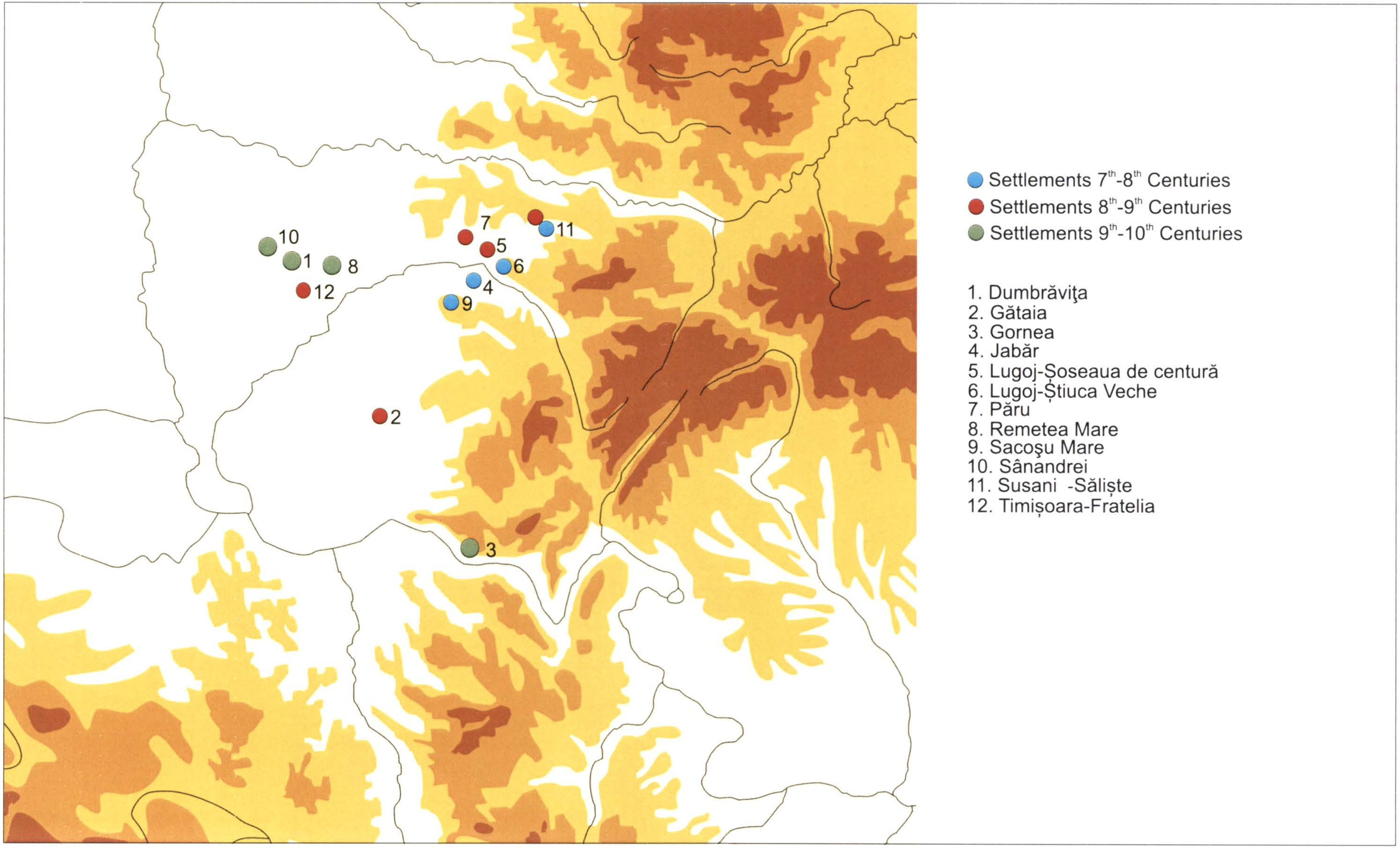
Plate 6. A: Fragment of whetstone (1), discovered in dwelling no. 1/C5; B: pottery fragments discovered in dwelling no. 8/C74 (8th–9th centuries).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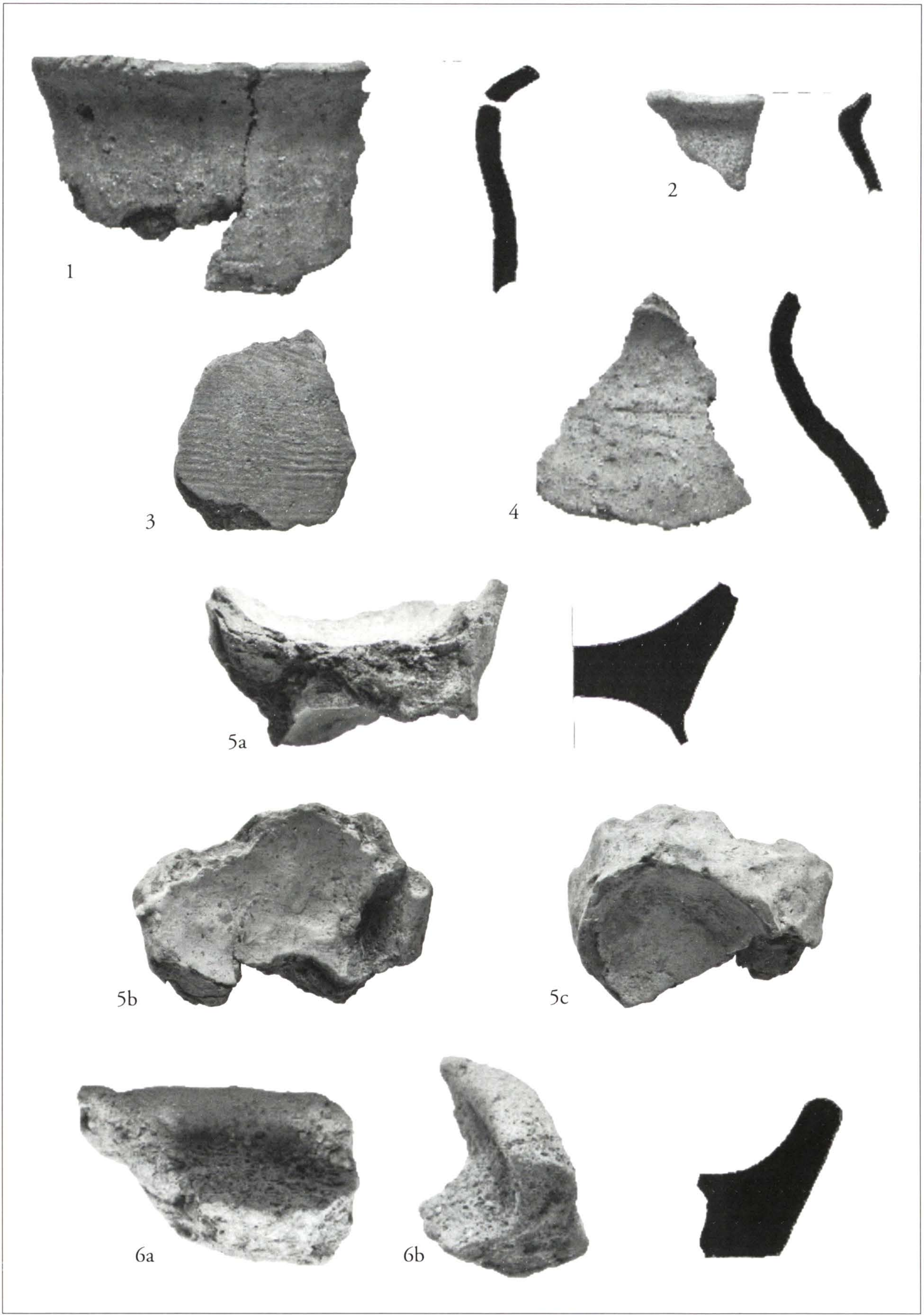
1. Dumbrăviţa
2. Gătaia
3. Gornea
4. Jabăr
5. Lugoj-Șoseaua de centură
6. Lugoj-Știuca Veche
7. Păru
8. Remetea Mare
9. Sacoşu Mare
10. Sânandrei
11. Susani -Săliște
12. Timișoara-Fratelia

Plate 7. Map of settlements dated to the seventh/eighth, eighth/ninth and ninth/tenth centuries discovered in Banat.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6b

Plate 8. Pottery fragments discovered in dwelling no. 13/C112 (1, 2, 4, 6a-b), pit no. 4/C58 (5a-c) and pit no. 8/C88 (3) (7th–8th centuries).

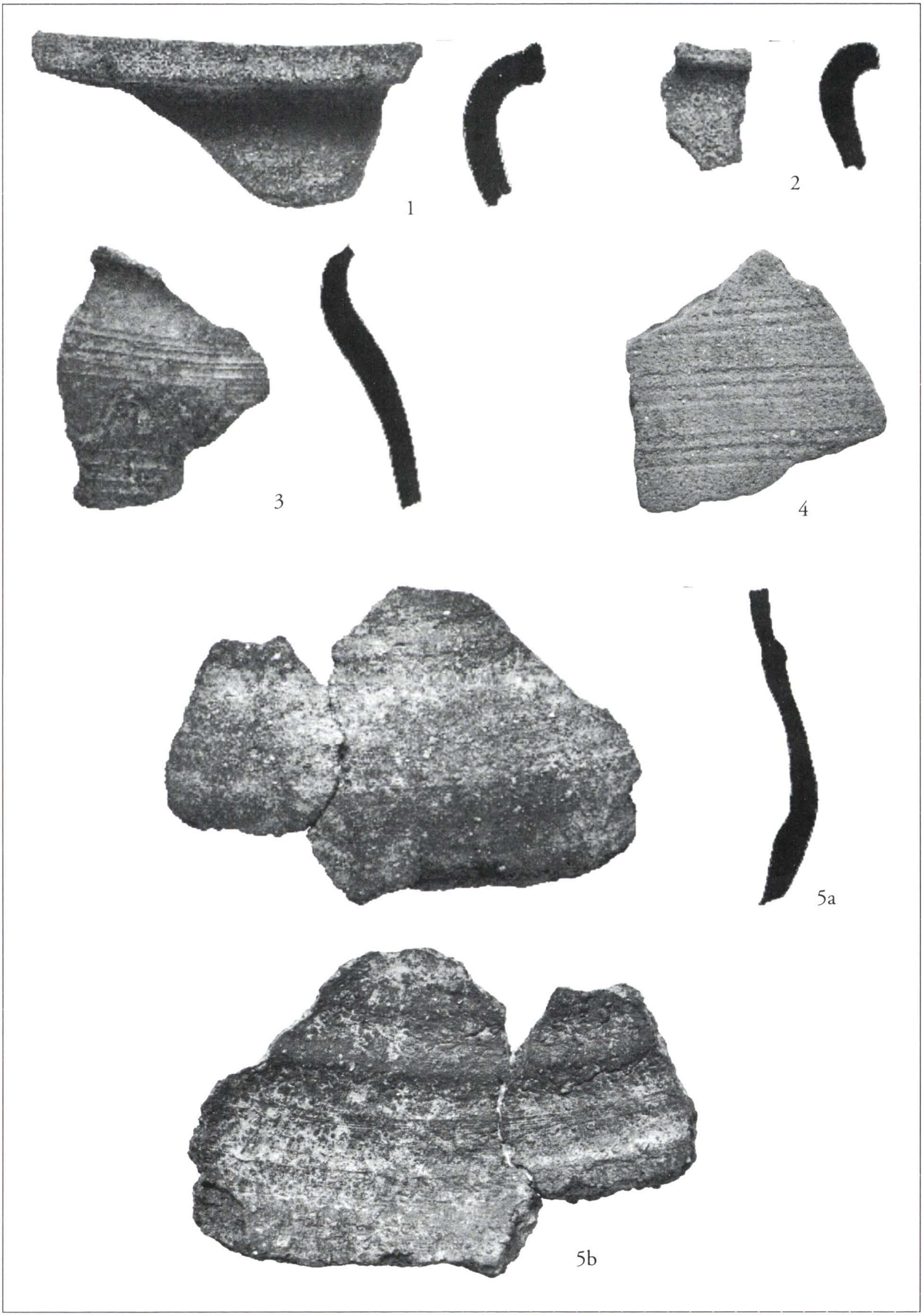

Plate 9. Pottery fragments discovered in dwelling no. 1/C5 (1–4)
and dwelling no. 8/C74 (5a-b) (8th–9th centuries).

Issues Regarding the Chronology of Turanic Graves from the Area between the Lower Danube, the Carpathians, and the Dniester, Dated to the 10th–13th Centuries*

Adrian Ioniță

Abstract: *Archaeologists have always been interested in the chronology of various discoveries, habitation features, funerary features, or simple artefacts, no matter their period of research. Despite this constant interest, the dating of the discoveries, as exact as possible, was and remains a process that generates discussions and opinions, sometimes as contradictory as can be. Though radiocarbon dating, despite all its limitations, has spread and tends to become generalized, there are still geographic areas and historical eras for which the method has not been yet employed. This is also the case of the Turanic graves from the area between the Lower Danube, the Carpathians, and the Dniester.*

So far we know circa 575 graves, which can be attributed to the Turanic nomads from the 10th–13th centuries, distributed across 159 sites from the above mentioned area. From a political perspective, according to the written sources, the extra-Carpathian area envisaged as the territory between the Lower Danube and the Southern Carpathians and the territory between the Eastern Carpathians and the Dniester was dominated starting with the 10th century by the Petcheneks, the Cumans, and the Tatars (in chronological order). One of the major goals of research in the field was, and still is, the attribution of graves to one of these populations of riders mentioned by the written sources. Thus, setting apart the graves of the Petcheneks mainly from those of the Cumans but also those of other groups (the Uzes, the Berendes, the Jasz population etc.) has marked the efforts of many archaeologists for more than half a century. Despite the attempts to establish a narrower chronology of the finds and to differentiate the graves of the late steppe populations, thus to decide which belonged to the Petcheneks and which to the Cumans based on horse bit types or peculiarities in funerary ritual, the results were inconclusive. By doing so, both representatives of these Soviet schools – S. A. Pletneva și G. A. Fedorov-Davydov – ended up making a series of fundamental methodological errors, believing that a certain ritual was characteristic to a single nomad group or that ethnic determinations could be made on the basis of a single category of objects. Unfortunately, despite the critiques and obvious progress made in the research of the funerary phenomenon in general, such erroneous beliefs persist in some archaeological publications even today.

Thus, in the absence of interdisciplinary analyses, one needs to take up again the observations starting from classical models, foremost establishing as exactly as possible the elements of ritual and then the detailed analysis of the categories of funerary inventory items. The current situation of the discoveries from the already mentioned research area is presented as follows: of the 575 graves (with 583 individuals, calculating one individual in each, including the six cenotaphs), 288 graves (with 295 individuals) contained no inventory (50.26%); 284 graves (with 285 individuals) had inventories (49.22%); and three graves with unknown status (0.52%) which can be part of any category with or without inventory. The elements of ritual analysed for the Turanic graves that can become, eventually, criteria for their chronological identification consist of the following: the type of burial; the structure of the pit; the position in which the body had been deposited; the position of the arms and legs; the orientation; the presence of the horse or horse parts; the presence or absence of a funerary inventory. Other practices: desecration/looting, intentional destruction during antiquity; traces of firing; skull trephination etc. The analysis of the inventory that is often the only indication of the attention paid to the deceased that can be grasped archaeologically, also

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* English translation: Ana Maria Gruia.

considered the main element of dating, consists of the identification of the categories of funerary inventory followed by the typological identification of the items in question. In the present analysis I have also referred to certain stratigraphic situations and to the presence of two or more Turanic graves in the same tumulus or in neighbouring tumuli.

Regarding the attempt to date the graves, and all initiatives of this type must be regarded with much caution and reservation, I have followed, in general terms, the chronology developed by G. A. Fedorov-Davydov adapted to the area under investigation. According to Fedorov-Davydov, the era in question can be divided into four larger chronological phases that correspond to the periods in which various populations dominated the North Pontic steppes: I. end of the 9th century – the 11th century (Petcheneks and other Turkic populations – Uzes, Berendes); II. last quarter of the eleventh century – the twelfth century (Cumans / Polovtsy / Kipchak); III. end of the 12th century – the middle of the 13th century (pre-Mongolian Cumans); IV. second half of the 13th century – the 14th century (Cumans, "Black skull-caps" / "Khlobuks", Alans / Jasz) during the period of the Golden Horde).

Thus, combining all the elements, one reaches the following distribution of the Turanic funerary features between the Carpathians the Lower Danube, and the Dniester among the chronological phases: phase I – 43 graves; phases I-II – 160 graves; phases II-III – 59 graves; phase IV – 128 graves; phases I-IV – 171 graves, adding, naturally, the nine graves with uncertain dating. Still, this picture, that might be closer or farther from the truth, remains a working exercise. The refining of the typo-chronology and future analyses (radiocarbon) that could lead to a narrower dating of the graves are two of the long-term research objectives.

Keywords: *Turanic graves, Petcheneks, Cumans, elements of ritual, inventory, chronology, 10th–13th century.*

Archaeologists have always been interested in the chronology of various discoveries, habitation features, funerary features, or simple artifacts, no matter their period of research. Despite this constant interest, the dating of the discoveries, as exact as possible, was and remains a process that generates discussions and opinions, sometimes as contradictory as can be. Though radiocarbon dating, despite all its limitations, has spread and tends to become generalized, there are still geographic areas and historical eras for which the method has not been yet employed. This is also the case of the Turanic graves from the area between the Lower Danube, the Carpathians, and the Dniester. This area represents the western end of the habitat of the last Turanic migrants and, at the same time, the extent of this funerary phenomenon.

So far we know circa 575 graves, which can be attributed to the Turanic nomads from the 10th–13th centuries, distributed across 159 sites from the above mentioned area[1] (Pl. 1). The great majority are burials in older tumuli, prehistoric *tell*-settlements, mounds, or other natural earth elevations, always located near rivers or lakes. From a political perspective, according to the written sources, the extra-Carpathian area envisaged as the territory between the Lower Danube and the Southern Carpathians and the territory between the Eastern Carpathians and the Dniester was dominated starting with the 10th century by the Petcheneks, the Cumans, and the Tatars (in chronological order). One of the major goals of research in the field was and still is the attribution of graves to one of these populations of riders mentioned by the written sources. Thus, setting apart the graves of the Petcheneks mainly from those of the Cumans but also those of other groups (the Uzes, the Berendes, the Jasz population etc.) has marked the efforts of many an archaeologist for more than half a century.

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[1] I have not included so far the discoveries made in Northern Bukovina, mostly for bibliographic reasons (see, nevertheless, a general picture of the funerary discoveries from that area in Mocja 1990), as well as several finds from Budjak the documentation of which is preserved in the archive of the Archaeology Museum in Odessa. Including these discoveries, the number of sites where Turanic graves were found would be between 160 and 170 and the number of features would probably surpass 600.

Interest in tumular burials started ever since the end of the 19th century, but the archaeological researched regarding the era under discussion only gained momentum after the Second World War. More than 2000 graves scattered between the North Pontic steppes and the Volga have been researched in the territory of the former U.S.S.R. Two main trends, in fact two historiographic schools, were born in the attempt to interpret these finds during the 1950s–196s. The first formed around Svetlana A. Pletneva and the other around German A. Fedorov-Davydov. Both attempted to establish a narrower chronology of the finds and to differentiate between the graves of the late steppe populations, largely to decide which belonged to the Petcheneks and which to the Cumans based on horse bit types or peculiarities in funerary ritual. By doing so, both representatives of these Soviet schools ended up making a series of fundamental methodological errors, believing that a certain ritual was characteristic to a single nomad group or that ethnic determinations could be made on the basis of a single category of objects. According to S. A. Pletneva, single-bar bits / mouthpiece with mobile rings at the ends date to the 10th–11th centuries and are only encountered in Petcheneks graves. At the same time, she believed that the characteristic of Petcheneks burials was the deposition of just the skull and lower part of the horse's legs, while that of Cuman burials was the combination of composite bits and entire horse depositions[2]. In his analysis of funerary discoveries of Turanic type from the steppes of Russia, G. A. Fedorov-Davydov noted these errors consisting of the belief that a certain ritual is only characteristic to a certain nomad group and that ethnic determinations can be performed based on a single object. His observations are perfectly solid, but, as a paradox, though he stresses the fact that there is no detailed and precise chronology of the archaeological materials, he ended up dating the same single-bar bit with mobile rings to the 12th century[3]. The consequence would be that the graves containing this type artifact belong rather to the Cumans than the Petcheneks and the discussion tends to become sterile. Unfortunately, despite the critiques and obvious progress made in the research of the funerary phenomenon in general, such erroneous beliefs persist in some archaeological publications even today.

Sometime after S. A. Pletneva and G. A. Fedorov-Davydov, more recently and closer to the area under investigation here, A. O. Dobroljubskij attempted to structure the Turanic graves anew. Dobroljubskij was an archaeologist at the Museum in Odessa, knew the area well, and took part in numerous archaeological campaigns in Budjak and elsewhere. Besides his own researches (many as member of the team led by A. V. Gudkova), he also valorized the excavation diary of Ja. Stempkovko (who, in the end of the 19th century, had researched several dozens of graves on the left side of the Dniester)[4]. A. O. Dobroljubskij's work entitled *Kočevniki Severo-Zapadnogo Pričernomorja v epohu srednevekovja*, printed in 1986 in Kiev, aimed to be a synthesis of the discoveries made in the North-West Pontic steppe and was undoubtedly a step forward in the research of the topic, though it includes numerous inadvertences and lacks[5]. Almost every piece of information must be verified, corrected, and completed, first of all on the basis of the excavation reports in archives from Kiev and Odessa. Naturally, many of his chronological identifications must also be regarded with caution. Due to all the above mentioned reasons and despite the fact that it was published more than three decades ago, the work did not have the envisaged impact on the research in the field as compared to the works of the two founders of schools of thought, i.e. S. A. Pletneva and G. A. Fedorov-Davydov.

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[2] Pletneva 1958, 155–156.

[3] Fedorov-Davydov 1966, 18–19, 105, 115, 141.

[4] In 1896–1899, Ja. Stempkovko performed excavations in a series of tumuli located in the area of seven municipalities in the Tiraspol region – Cioburciu, Hlinaia, Parcani, Ploskoe, Serbka, Sucleia, and Ternovka. Inside the approximately 50 researched tumuli he found several dozens of graves dated to the era under discussion, but also to the subsequent one, the Golden Hoard Age. Paradoxically, the results of these excavations entered the scientific circuit much later, as the reports were only published circa nine decades later (Dobroljubskij 1984, 153–174).

[5] Dobroljubskij 1986.

The antiquities attributed to the late nomads drew the attention of researchers from Romania especially starting with the 1970s. Thus, Petre Diaconu dealt with the issue of the Turanic population at the Lower Danube, mainly based on the written sources, in two volumes: *Les Petchénegues au Bas-Danube*[6] and *Les Coumans au Bas-Danube aux XI^e^ et XII^e^ siècles*[7], published in 1970 and 1978, focusing mostly on Dobrudja.

For Muntenia, in a special study published in 1973[8] Mihai Sâmpetru was the first to deal with such discoveries made up to that point, followed by an improved version in French[9]. Mainly dealing with the typologies of the Soviet School of Archaeology founded by S. A. Pletneva[10], the author believed that all of the graves known until that point belonged to the Petcheneks present in Muntenia starting with the final quarter of the 10th century and dated starting with this date and ending during the 11th century. He was seconded several years later by P. Diaconu who published a study on the Cumans at the Lower Danube[11]. The conclusions of the two researches are somewhat different: P. Diaconu attributed some of the graves to the Cumans, based on arguments regarding the Turanic funerary discoveries formulated by the other representative of Soviet archaeology, G. A. Fedorov-Davydov[12]. Under the impulse of the above mentioned works, among other things, a series of other studies were published, with their authors presenting focused discoveries of Turanic graves in Muntenia and siding with one or the other line of thought in the chronological and cultural identification of the features[13]. I need not insist on each individual article, suffice to mention that every text contributed, to some degree of accuracy, to the enrichment of the documentary basis of this category of burials. This lot of discoveries has currently almost tripled in size (37 graves in 24 municipalities in Muntenia and Oltenia), but a few are not Turanic with certainty.

Victor Spinei's study[14] dedicated to the discoveries from Moldova (between the Carpathians and the Prut) was published almost at the same time as Sâmpetru's articles. Thus historians have sketched for the first time an archaeological picture of these Turanic migrants on the territory of Romania, limited to about 25 graves at that stage of research. Ten years later, in 1985, with a considerably larger lot of discoveries (circa 120 graves) and including also the area between the rivers Prut and Dniester, V. Spinei published the book entitled *Realități etnice și politice în Moldova meridională în secolele X-XIII. Români și turanici*[15] [*Ethnic and political realities in southern Moldova during the 10th–13th centuries*]. This was mainly an archaeological approach, but included a significant context of political history regarding the Turanic nomads from southern Moldova and beyond. Spinei's interest for the history of the late migrators led to the publication of two more volumes during the 1990s[16]. A decade later, V. Spinei returned to the issue of the Turanics in an attempt to bring the archaeological information up to date, as it had increased exponentially during the 1980s in the territory between the Prut and the Dniester, with a lot of more than 400 graves. The volume printed in 2009, entitled *The Romanians and the Turkic Nomads North of the Danube Delta from the Tenth to the Mid–13th Century*[17] mentions almost all of the discoveries known at that time (478 graves in 124 municipalities), but lacked full descriptions and detailed analyses of the features.

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[6] Diaconu 1970.

[7] Diaconu 1978.

[8] Sâmpetru 1973, 443–468.

[9] Sâmpetru 1974, 239–264.

[10] Pletneva 1958, 153–186; Pletneva 1963, 216–259; Pletneva 1973.

[11] Diaconu 1978, 14–21.

[12] Fedorov-Davydov 1966.

[13] See for this: Ioniță 2004, 462–488; Ioniță 2005, 13–14.

[14] Spinei 1974, 389–415; Spinei 1973, 277–292.

[15] Spinei 1985.

[16] Spinei 1996; Spinei 1999.

[17] Spinei 2009.

Unlike the area between the Prut and the Dniester where thousands of tumuli from different eras have been excavated, a fact reflected in the specialized literature by the publication of several volumes – most of which are included in the bibliography of the present study – in Romania there was no constant interest in the research of the tumuli, not even due to other necessities than those of a scientific nature. Therefore the number of features uncovered through systematic or rescue excavations performed in funerary mounds is small and thus one can just indicate a study dedicated to the kurgans that include seven Turanic graves discovered over time on the territory of Galaţi County[18].

This brief overview of the historiography aims to show that despite the recorded efforts and progress in the structuring of archaeological data, several problems still persist, hence the difficulty of performing narrower chronological identifications.

Returning to the present area of research, the situation of the discoveries can be abstracted thus: of the 575 graves (with 583 individuals, calculating one individual in each, including the six cenotaphs), 288 graves (with 295 individuals) contained no inventory (50.26%); 284 graves (with 285 individuals) had inventories (49.22%); and three graves with unknown status (0.52%) which can be part of any category with or without inventory.

One must also discuss the issue of how the secondary graves without an inventory have been identified, as some authors have attributed them to the late nomads (the Turanics included), while others have avoided to include them in any certain era or combined the two variants. I should remind here the fact that out of the 575 (Turanic) graves, almost half lack a funerary inventory and circa 5% of the features discovered in the tumuli located between the rivers Prut and Dniester have been published in various works without being attributed to any certain period. Naturally, the issue pertains to methodology, fine stratigraphic observations, the knowledge of the era's rituals and, last but not least, the experience and scientific interest of the archaeologists or even, I might say, their "courage" or "fear" of performing such identifications in the absence of solid arguments. One thus cannot exclude the possibility that these features belong to the era under discussion here – in which case the number of Turanic graves increases, while some of the graves (especially those without an inventory) attributed to the Turanics belong in fact to other chronological horizons. At the same time, a small number of graves that contain atypical inventory items might have been erroneously attributed to the Turanics of the 10th–13th centuries.

From the perspective of interdisciplinary analyses, I should also mention the fact that only approximate 100 graves belonging to this horizon (circa 18%) have benefited from expert anthropologic analyses that have identified the gender and age of the deceased, but have not calculated other metric elements (height) or pathology elements. No radiocarbon dating has been attempted, even less more complicated analyses like strontium or DNA – that could have made a significant contribution to available knowledge, though this is not the place to detail this aspect. Thus, in the absence of interdisciplinary analyses, one needs to take up again the observations starting from classical models, foremost establishing as exactly as possible the elements of ritual and then the detailed analysis of the categories of funerary inventory items.

The elements of ritual analyzed for the Turanic graves that can become, eventually, criteria for their chronological identification consist of the following: the type of burial; the structure of the pit; the position in which the body had been deposited; the position of the arms and legs; the orientation; the presence of the horse or horse parts; the presence or absence of a funerary inventory. Other practices: desecration/looting, intentional destruction during antiquity; traces of firing; skull trephination etc.

The analysis of the inventory that is often the only indication of the attention paid to the deceased that can be grasped archaeologically, also considered the main element of dating, consists of the identification of the categories of funerary inventory followed by the typological identification of the items in question.

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[18] Brudiu 2003.

In the present analysis I have also referred to certain stratigraphic situations and to the presence of two or more Turanic graves in the same tumulus or in neighboring tumuli.

In the case of the present discussion, the character of the research is also significant, i.e. how the available data have been obtained and how accurate they are, considering that some of the discoveries date to the end of the 19th century[19].

The most numerous graves – 423 – have been unearthed during rescue excavations, usually triggered by agricultural landscaping (73.19%), 125 were investigated through systematic researches (22.05%), while 27 are fortuitous finds (4.76%). 149 graves (25.92%) have been destroyed or disturbed, of old or through modern interventions, so that the data have been more or less altered. Adding also the fact that the documentation of the excavations performed in the end of the 19th century is sometimes fragmentary or confusing, one reaches the conclusion that the available archaeological data regarding almost one third of these discoveries are incomplete or even doubtful.

The elements of ritual that can be grasped archaeologically start with the identification of the type of burial – tumular or flat. In the case of the first, which form the immense majority of the graves, the position inside the tumulus as compared to the cardinal points can also hold meaning. In 534 of the cases the burials were inside tumuli (92.86%) and in 15 cases in various other mounds or prehistoric *tell*-settlements (2.60%); 18 graves are or appear to be of the flat type (3.13%); while the situation of eight graves remains unknown (1.41%).

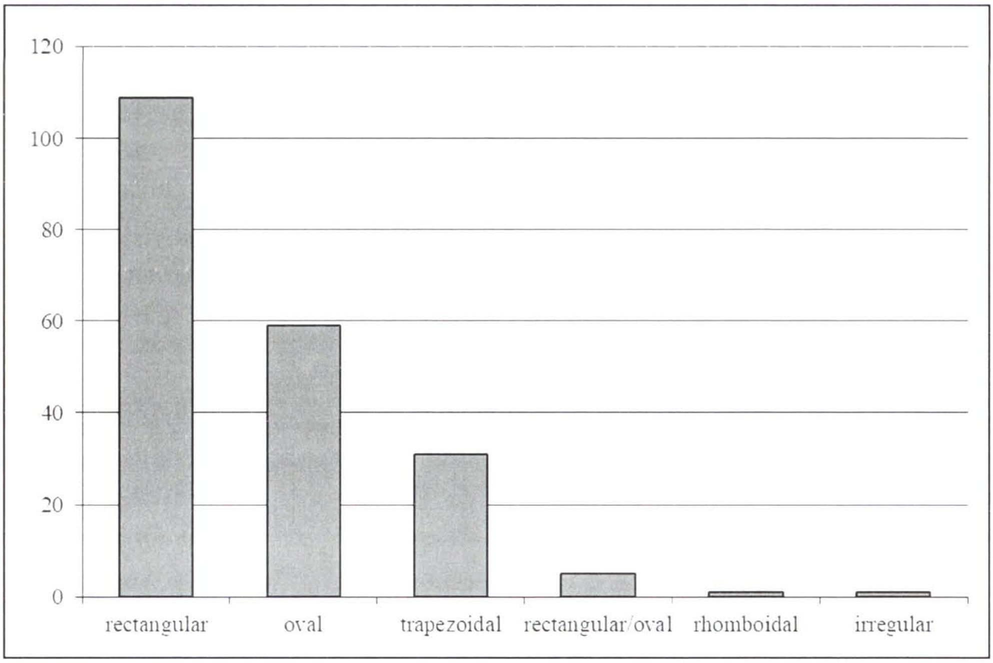

Fig. 1. Graph of pit shapes

Pits and funerary structures: The pits have been identified in 206 of the 575 graves (36.33%). The most frequently encountered are rectangular pits with more or less rounded corners – 109 cases (52.91%), oval – 59 cases (28.64%), trapezoidal – 31 cases (15%), with one straight end and one oval end – five cases (2.42%), rhomboidal – one case (0.48%), and irregular – one case (0.48%) (Fig. 1).

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[19] See for example: Brandenburg 1908; I do not wish to comment here upon the limitations and drawbacks of the methods of excavation and of recording the resulting data, but I need to mention the fact that one must show caution regarding, foremost, the number of graves, then the elements of ritual and the distribution of the inventories in each feature. For this reason, I believe that the data provided by these excavations (somewhat Romantic in nature) is more difficult to use in the inclusion of the graves in different categories, in the typology of the artifacts deposited as funerary inventory goods and ending, naturally, with the chronological identification.

Out of the 206 identified pits, 25 display special designs in the method of digging (12.13%): 18 with a step along one of the long sides (8.73%), one with steps along both sides (0.48%), two with a step along one of the long sides and niches along the opposite side (0.97%); while four are provided with a side niche along one of the long sides (1.94%).

In five graves the deceased had been buried in wooden coffins. In 16 cases the pits were lined with wood all around or had just a lid made of planks. Wooden remains from such designs and not objects found in the pits (on the bottom, on top, or in the fill) have also been recorded in 32 more graves. Forty-three graves contained vegetal remains (tree bark, leaves, grass, reed, other interwoven structures, mats) that had been deposited either on the bottom of the pit or covering the body. In 10 graves stones were employed in the design of the pit. Six graves had been designed with layers of light yellow sand and limestone on the bottom, sometimes followed by a vegetal bed. An initial strong firing of the pit has been noted in one case.

Position: 555 individuals from the 572 graves (eight are double burials) had been deposited in dorsal decubitus (95.65%). There are seven exceptions, with four bodies in lateral decubitus – three on the right (Belolesje T.1/G.1[20]; Pomazani T.3/G.2; Saiţa T.6/G.8b), one on the left (Însurăţei G.1), and three in ventral decubitus (Saiţa T.6/G.8a; Talmaza T.6/G.2; Trapovka T.5/G.2a). Though unusual for the populations of the era, these practices have analogies in Sarkel (Ukraine), where archaeologists discovered a series of similar graves dated to the 9th–10th centuries, during the Khazar Period[21].

Twelve graves had been almost completely destroyed, so that the position of the bodies could not be reconstructed. Six features are symbolic burials (cenotaphs)[22], and in these cases there are naturally no elements of ritual connected to the presence of the deceased to be recorded.

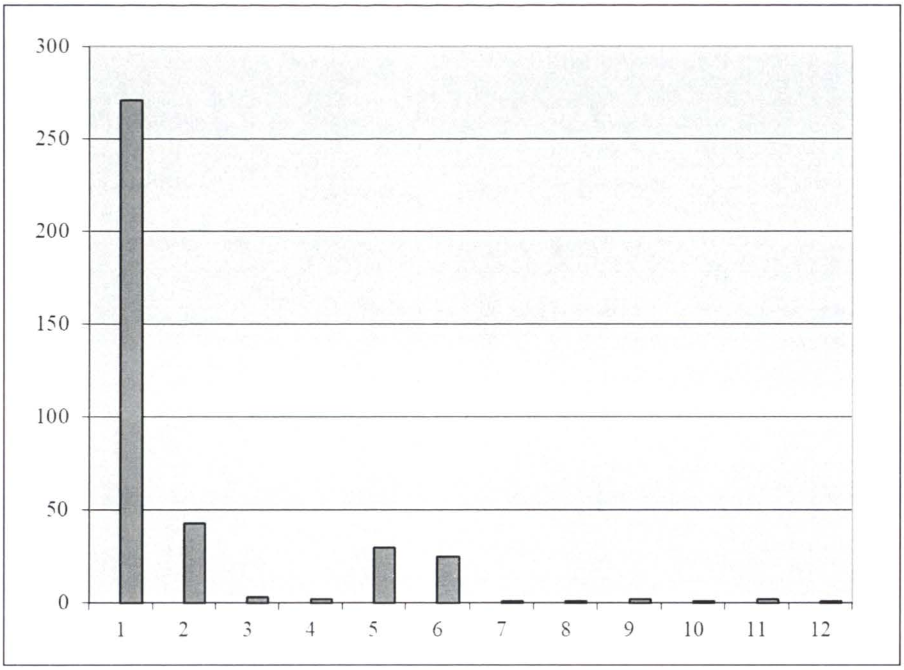

Fig. 2. Graph regarding the position of the arms

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[20] T. = tumulus; G. = grave.

[21] Artamonova 1963, 195–196, fig. 130; 199–200, fig. 135; 203–204, fig. 137.

[22] There are other such discoveries in the eastern area, such as the one in Kolobovki (Žurov Kurgan) near Sarai on the Volga, where the feature was dated to the ninth century and attributed to the Petcheneks (Kruglov *et al.* 2001, 6).

The position of the arms has been established for 382 individuals (circa 66%). I have recorded the following 12 positions and variants (Fig. 2): 1. both arms extended along the body (271 graves; 70.94%); 2. the right arm extended along the body, the left arm bent at the elbow and the hand placed on the pelvis (43 graves; 11.37%); 3. the right arm extended along the body, the left arm bent at the elbow and the hand placed on the chest (three graves; 0.79%); 4. the right arm extended along the body, the left arm strongly bent at the elbow and the hand placed on the clavicle (two graves; 0.52%); 5. the left arm extended along the body, the right arm bent at the elbow and the hand placed on the pelvis (30 graves; 7.93%); 6. both arms slightly bent at the elbow and the hands placed on the pelvis (25 graves; 6.54%); 7. both arms slightly bent at the elbow and the hands placed on the abdomen (one grave; 0.26%); 8. the right arm slightly bent at the elbow and the hand placed on the pelvis, the left arm strongly bent at the elbow and the arm placed on the end of the right femur (one grave; 0.26%); 9. the right arm bent at the elbow and the hand placed on the chest, the left arm slightly bent at the elbow and the hand placed on the pelvis (two graves; 0.52%); 10. the right arm strongly bent at the elbow and the hand placed on the clavicle, the left arm bent at the elbow and the hand placed on the chest (one grave; 0.26%); 11. both arms bent at the elbow and the hands placed on the chest (two graves; 0.52%); 12. both arms strongly bent at the elbow and the hands placed on the clavicles (one grave; 0.26%). In the case of 41 graves, the position of a single arm was recorded due to partial disturbances (7%): the right arm extended along the body (19 graves); the left arm extended along the body (nine graves); the right arm slightly bent at the elbow and the hand placed on the pelvis (eight graves); the left arm slightly bent at the elbow and the hand placed on the pelvis (four graves); the right arm strongly bent at the elbow and the hand placed on the clavicle (one grave).

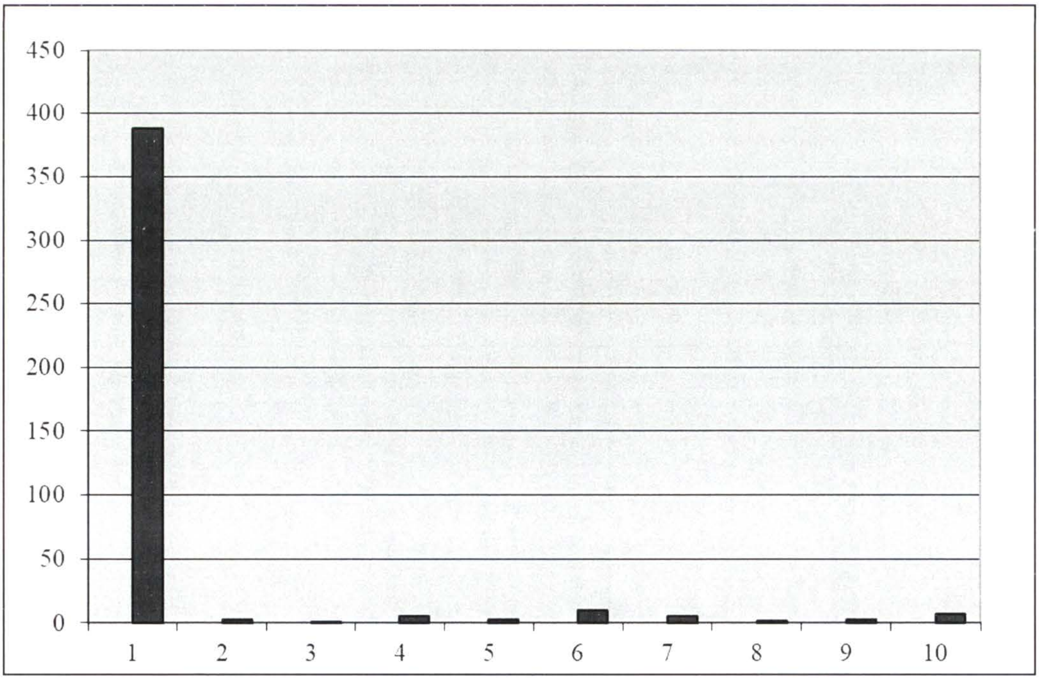

Fig. 3. Graph regarding the position of the legs

Archaeologists have been able to record the position of the legs in the case of 427 individuals (circa 73.56%). The following 10 positions have been noted (Fig. 3): 1. extended legs (388 graves; 91%); 2. the right leg bent at the knee to the right, the left leg extended (three graves; 0.78%); 3. the right leg bent at the knee to the left, the left leg extended (one grave; 0.26%); 4. the left leg bent at the knee to the right, the right leg extended (five graves; 1.30%); 5. the left leg bent at the knee to the right, the left leg extended (three graves; 0.78%); 6. both legs bent at the knees, tilted to the right (10 or 11 graves; 2.35/2.61%)[23]; 7. both legs slightly bent at the knees, tilted to the left (four or five graves; 0.78/1.05%); 8. legs in rhomboidal position (two graves; 0.52%); 9. legs crossed (three graves; 0.26%); 10. legs crossed at the level of the tibias or the soles (seven graves; 1.82%). Due to partial derangements, in four graves the position of a single leg could be recorded: the right leg extended (two graves); the left leg extended (two graves).

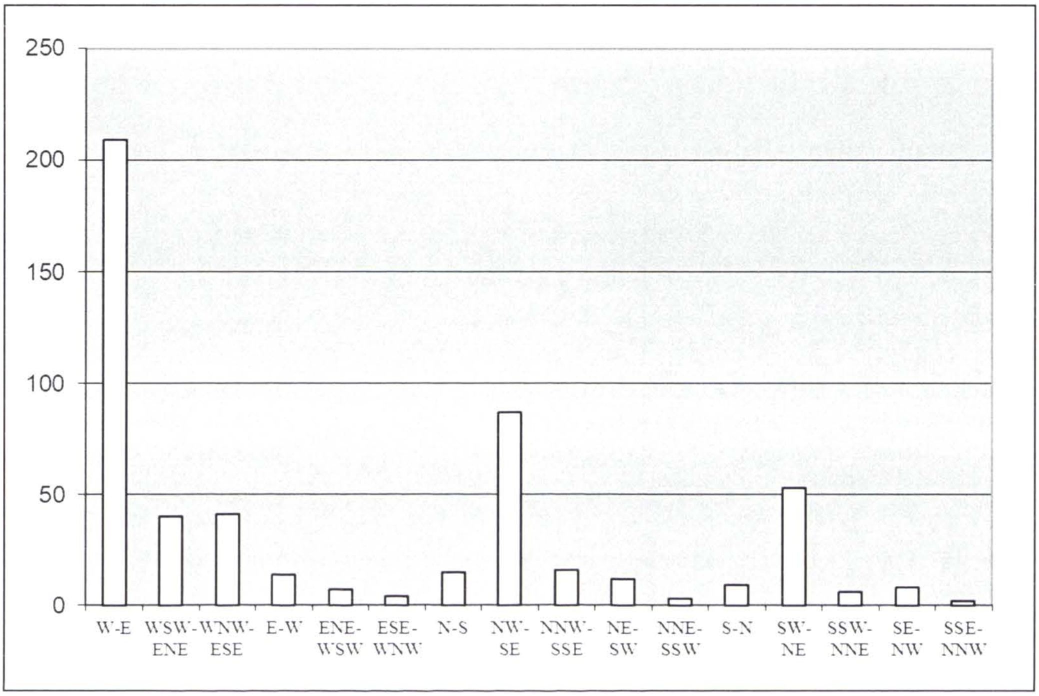

Fig. 4. Graph regarding the orientation of the graves

The orientation has been noted in the case of 534 individuals. The graves of the period under discussion were oriented thus (Fig. 4):

W-E (209 cases; 39.13%); WSW-ENE (40 cases; 7.54%); WNW-ESE (41 cases; 7.54%). Total group W-E (290 graves; 54.30%).

E-W (14 cases; 2.64%); ENE-WSW (seven cases; 1.32%); ESE-WNW (four cases; 0.75%). Total group E-W (25 graves; 4.71%).

N-S (15 cases; 2.83%); NW-SE (87 cases; 16.41%); NNW-SSE (16 cases; 3%); NE-SW (12 cases; 2.26%); NNE-SSW (three cases; 0.56%). Total group N-S (133 graves; 25%).

S-N (nine cases; 1.70%); SW-NE (53 cases; 10%); SSW-NNE (six cases; 1.13%); SE-NW (eight cases; 1.50%); SSE-NNE (two cases; 0.37%). Total group S-N (79 graves; 14.90%).

Offerings. 116 graves contained entire horse skeletons or only horse body parts. According to the type of offering deposited in the grave, I have established four groups, namely (Fig. 5): I. graves containing an entire horse skeleton: 10 graves; II. graves containing a horse skull and the extremities of the horse's legs: 72 graves; III. graves containing a horse skull: 15 graves; IV. graves containing the extremities of the horse's legs: 10 graves. One can add nine more graves that have revealed horse bones/body parts without other mentions, either due to the conditions of discovery or to the incomplete manner in which the graves in question have been published (Fig. 6). These groups do not seem to matter cronologically, being based on ritualistic preferences, eventually we can talk about other symbolistic meanings.

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[23] In the case of the grave in Cimişeni T.6/G.2 there is no mention of the direction in which the legs were tilted – to the right (6) or to the left (7).

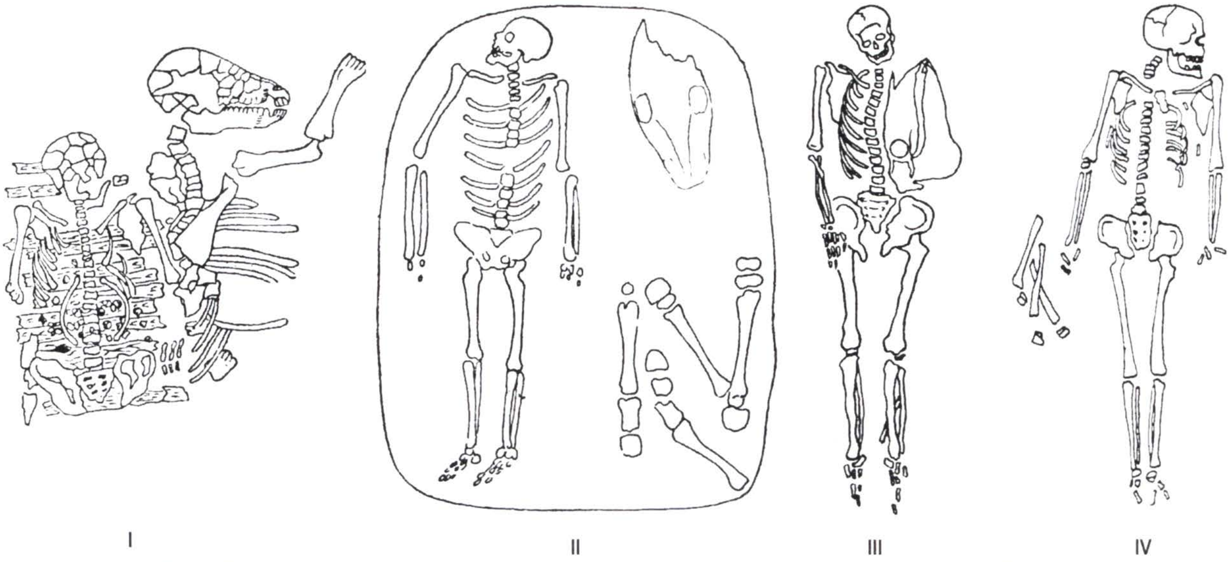

Fig. 5. Groups of graves with depositions of horses or horse body parts: I (Trapovka T.10/G.9 according to Subbotin *et al*. 1995a); II (Zîrneşti G.7 according to Chetraru 1969); III (Codrul Nou T.3/G.5 according to Jarovoj 1985); IV (Talmaza T.1/G.8 according to Agulnikov, Antipenko 1990)

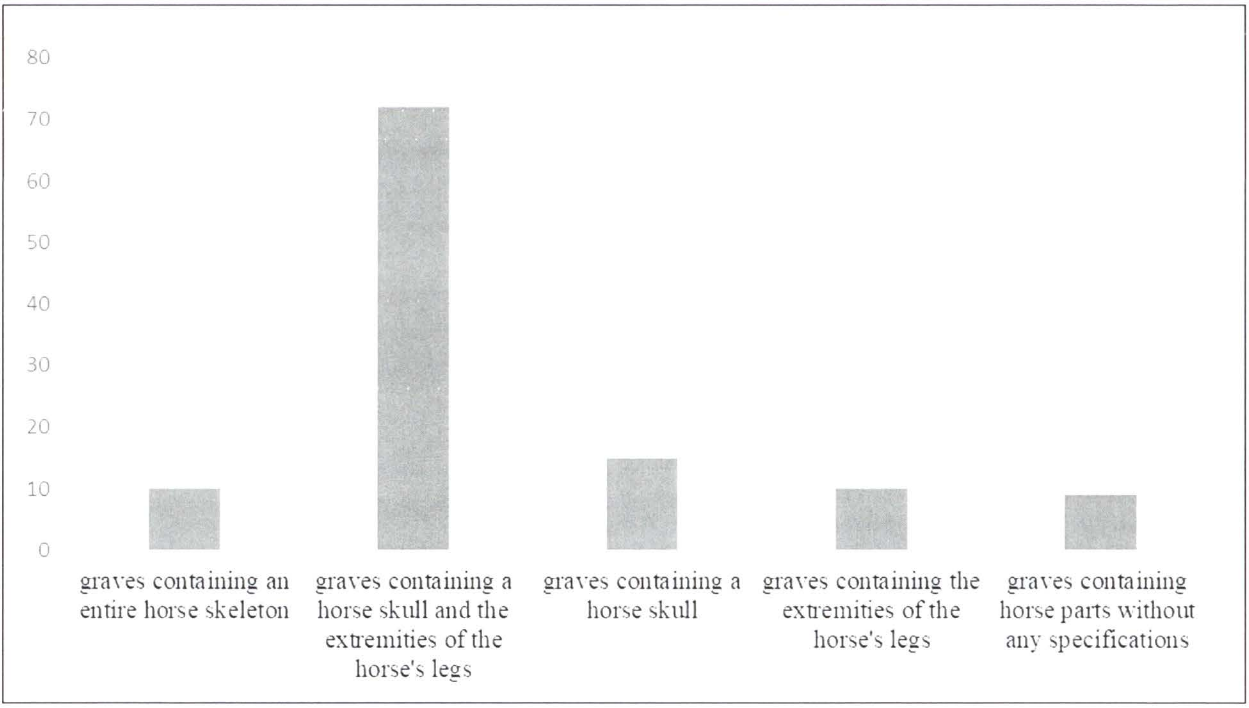

Fig. 6. Graph of graves with depositions of horses or horse body parts

Archaeologists have noted several positions in which the offering was deposited as compared to the deceased in that grave. The first distinction envisages the height of the deposition – on the same level with the human body or one earthen step above it. There are also cases in which the offering partially overlapped the deceased. Other criteria relate to the position of the offering on the right or on the left side of the human body and the manner in which the offering was set in the pit[24].

Group I includes graves with an entire horse deposited on the left side of the human body – three cases, out of which one with the horse deposited on an earthen step, on the right – one case, and even one horse on each side of the human body. For the other five graves, the position in which the horse had been deposited is not mentioned.

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[24] Ioniţă 2013, 115–150, featuring only 112 graves with horse deposition recorded at that stage of research.

Inside group II archaeologists have recorded 11 positions of depositing the offering as compared to the human body a. on the left side, usually the horse skull by the deceased's head or shoulder and the horse leg extremities more or less set in pairs along the deceased's body – 40 graves, out of which 10 on an earthen step; b. the horse skull on the left shoulder of the deceased, the horse leg extremities on the left side – four graves; c. the horse skull on the chest of the deceased, the horse leg extremities on the left side – two graves, one with a step; d. the horse skull and two horse leg extremities on the left side, the other two on the right side of the deceased – one grave; e. the horse skull and two of the horse leg extremities on the left side, the other two between the tibias of the deceased – one grave; f. the horse skull on the left shoulder of the deceased, the horse leg extremities by the left sole and between the tibias – one grave; g. on the right side of the deceased, the horse skull usually by the head and shoulder of the deceased and the horse leg extremities set more or less in pairs along the body of the deceased – nine graves; h. the horse skull on the right side of the deceased and the horse leg extremities on the left – two graves; i. the horse skull and two of the horse leg extremities on the right side of the deceased, the other two on the left – one grave; j. the horse skull and leg extremities by the feet of the deceased – one grave; k. the horse skull and leg extremities on top of the deceased's leg – one grave. Three of the graves are cenotaphs and in five cases the manner of deposition has not been mentioned.

Inside group III archaeologists have recorded the following four positions in which the horse skull was deposited: a. to the left of the deceased's head – six graves; b. to the right of the deceased's head – two graves; c. on the chest of the deceased – two graves; d. above the top of the deceased's head – one grave. Two graves are cenotaphs and in other three the position is not clearly stated.

Two positions in which the horse leg extremities had been deposited were recorded inside group IV: a. on the left side – six graves; b. on the right side – two graves. For two of the graves the location of deposition is not mentioned or is uncertain.

In four of the graves that contained horse parts without other specifications, the deposition was made on the left side of the human shoulder or above the top of the human head (one with a step), while the location is not stated for the other five graves.

Pits with the offering deposited on a step have been identified in 14 graves, ten in group IIa, one each in groups I, IIc, IVa and the category of horse body parts without other specifications. Out of the 116 graves of entire or partial horse depositions, 103 (88.59%) contained inventory items, while the other 13 only contained the horse remains.

The inventories of the Turanic graves include several tens of categories of artifacts made of metal, bone, glass, and stone (Fig. 7): 1. arrowheads (71 graves; 25%); 2. bits (69 graves; 24.29%); 3. knives (64 graves; 22.53%); 4. buckles (47 graves; 16.54%); 5. pendants and buttons (42 graves; 14.78%); 6. worked bone plates (41 graves; 14.43%); 7. earrings (35 graves; 12.32%); 8. iron strike-a-lights (32 graves; 11.26%); 9. stirrups (28 graves; 9.85%); 10. flint flakes (28 graves; 9.85%); 11. appliques (20 graves; 7%); 12. rings (19 graves; 6.73%); 13. swords/sabres (16 graves; 5.63%); 14. quivers (15 graves; 5.31%); 15. beads (15 graves; 5.31%); 16. daggers (13 graves; 4.60%); 17. pottery (13 graves; 4.60%); 18. knuckle bones (*astragalus*) (nine graves; 3.19%); 19. lance/spear heads (seven graves; 2.48%) 20. armor pieces (seven graves; 2.48%); 21. metal clamps (six graves; 2.12%); 22. whetstones (five graves; 1.77%); 23. digital rings (four graves; 1.41%); 24. scissors (four graves; 1.41%); 25. metal cauldrons (four graves; 1.41%); 26. axes (four graves; 1.41%); 27. metal nails (four graves; 1.41%); 28. helmets (three graves; 1%); 29. bracelets (three graves; 1%); 30. spindle whorls (three graves; 1%); 31. bit shanks (*psalia*) (three graves; 1%); 32. wooden buckets (two graves; 0.70%); 33. iron horseshoes (two graves; 0.70%); 34. padlocks (two graves; 0.70%); 35. mirrors (0.35%); 36. bow holsters (0.35%); 37. coins (0.35%).

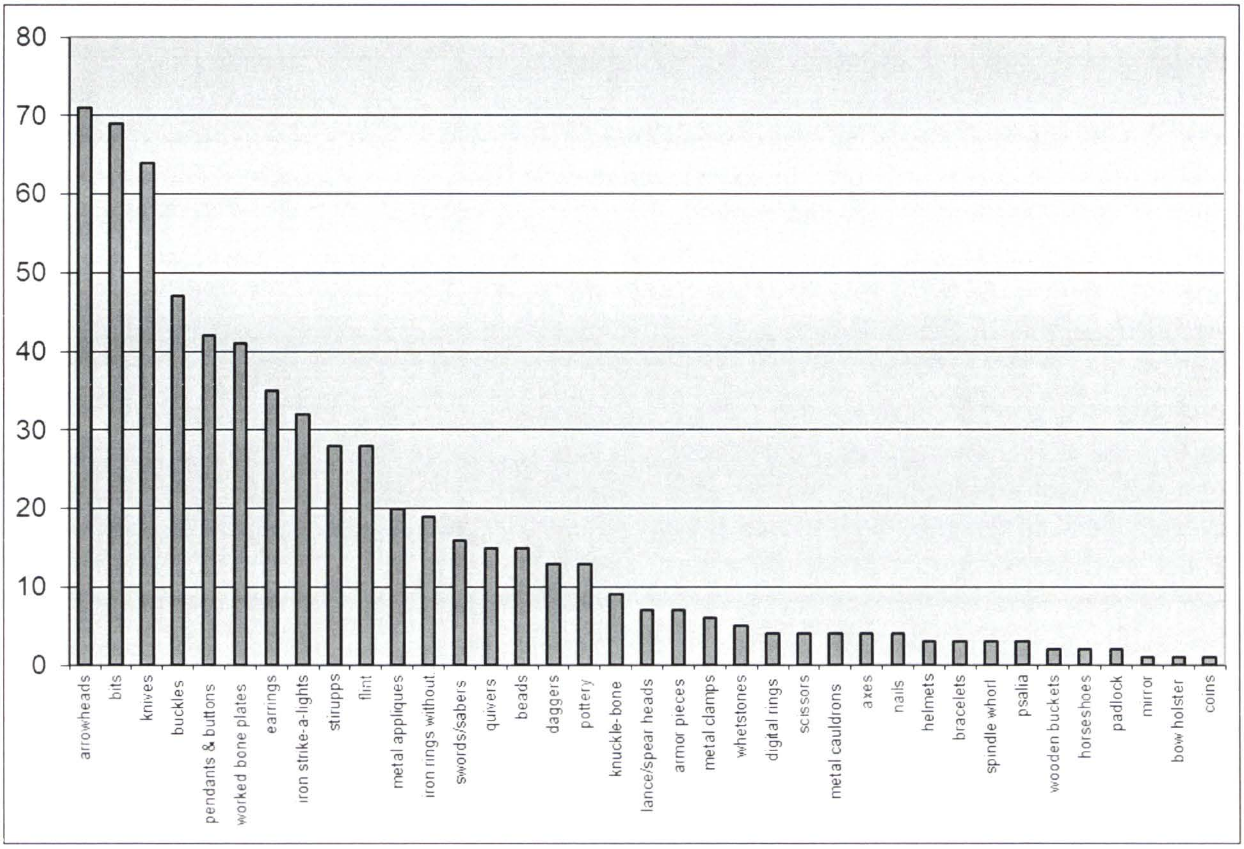

Fig. 7. Graph regarding the funerary inventories of the Turanic graves

Various other metal artifacts were found in 27 graves (9.57%). Different other items made of bone were found in 10 graves (3.54%). In nine graves the archaeologists found stones with more or less clear function (3.19%). Eight graves contained thin sheets of gold, coming from the gilding of objects (2.83%) and one other grave contained thin sheets of copper, also from the decoration of an object. Eleven graves preserved textile remains, from the clothes the deceased wore (3.90%). Three graves contained leather traces (1%). In 56 graves archaeologists found fragmentary metal items the function of which cannot be identified due to their poor state of preservation (19.50%). Fourteen graves contained various other animal bones, other than horse bones and knuckle bones for gaming (4.96%). Two graves revealed remains from two wooden items other than quivers, bow holsters or arrow shafts (0.70).

Funerary standard. The analysis indicates that the standard ritual consisted of secondary inhumation in a tumulus (93%); in a rectangular pit (53%); with the body placed in dorsal decubitus (96%); with the arms extended along the body (71%); stretched legs (91%); the body oriented W-E including slight deviations (54%); with an offering consisting of entire or fragmentary horses (skull and legs extremities) (20%). Taking into consideration only items found in at least ±10% of the graves with an inventory, the standard inventory consisted of the following items: arrowheads, bits, knives, buckles, pendants, worked bone plates, earrings, iron strike-a-lights, stirrups, and flint flakes.

Groups of inventories according to function: the items part of the funerary inventories can be grouped, according to function, in the following nine groups:

I. Harnesses: 1. bits (69 graves); 2. stirrups (28 graves); 3. bit shanks (*psalia*) (three graves); 4. metal ornaments for the harness (two graves); 5. metal seals on the saddle ends.

II. Weapons and military equipment: 1. arrowheads (71 graves); 2. knives (64 graves); 3. worked bone plates – most coming from parts of the bow (41 graves); 4. swords/sabres (16 graves); 5. quivers (15 graves); 6. daggers (13 graves); 7. lance/spear heads (seven graves); 8. pieces of armor (chain mail – six graves, plate mail – one grave = seven features); 9. axes (four graves); 10. helmets (three graves); 11. bow holsters.

III. Jewelry items and dress accessories: 1. buckles (47 graves); 2. pendants / buttons (42 graves); 3. earrings (35 graves); 4. belt or dress appliques (20 graves); 5. beads (15 graves); 6. digital rings (four graves); 7. bracelets (three graves).

IV. Tools / utensils: 1. iron strike-a-lights (32 graves); 2. flint flakes (28 graves); 3. whetstones / sandstone (five graves); 4. scissors (four graves); 5. spindle whorls (three graves); 6. bone piercer; 7. iron piercer (awl); 8. puncheon.

V. Vessels: a. ceramic pots (13 graves); b. metal cauldrons (four graves); c. wooden buckets (two graves).

VI. Gaming pieces: knuckle bones (*astragalus*) (nine graves).

VII. Coins: (one grave).

VIII. Various items: 1. rings with uncertain function (19 graves); 2. metal clamps (six graves); 3. iron nails (four graves); 4. small handles (made of iron, bronze, or bone) (three graves); 5. iron horseshoes (two graves); 6. padlocks (two graves); 7. mirror; 8. cow bell; 9. rectangular case made of copper; 10. rounded and oblong iron object (mace / knout?); 11. bars and iron plates; 12. bronze bar; 13. oblong, fragmentary iron object with an attached copper plate; 14. iron object with a bent end (fragmentary iron strike-a-lights?); 15. octagonal, flattened iron object with two orifices; 16. four elongated conical iron objects, hollow in the interior; 17. iron object with one end bent like a kook and the other end flattened and pointed.

IX. Other items: 1. fragmentary iron objects the function of which cannot be identified (55 graves); 2. bones of other animals (14 graves); 3. bone items (10 graves); 4. textile fragments (11 graves); 5. stone items (nine graves); 6. thin sheets of gold, coming from the gilding of objects (eight graves); 7. pieces of leather (three graves); 8. wooden items (two graves).

Not viewing the functional division of the objects as absolute, this general typology is relevant in illustrating the material culture of the Turanics in the afterlife and not only. Some of the objects, such as the knives, can be interpreted, like previously mentioned, (also) as utensils – size is not always a clear-cut criterion of identification. Other objects, such as some of the buckles, very likely part of harnesses, just like certain appliques[25]. Also, some of the rings without clear function could have been part of bit shanks or buckles. In the case of bell-shaped pendants, the items could have also been used as buttons, while globular pendants, mainly used as buttons, could have also been employed as pendants. In all the above mentioned situations, the items in question are certainly part of other functional groups.

This is not the place for a detailed analysis of all the items in the funerary inventory of the Turanic graves, but I shall briefly discuss the main categories of objects that are more expressive of the period and area of interest here. Starting from the nine groups of item categories in the funerary inventories set above, I shall select those artifacts that are representative from a typological and chronological perspective. I do not aim to discuss the details of their production technology, nor to exhaustively mention their analogies or set a chorological and chronological context that would eventually lead to a better dating of the features in which they were found. I shall mention, from the very beginning, the fact that these items are characteristic to the era and not to certain populations. Furthermore, the analysis is also conditioned by the precarious state of preservation of many of the items – some of them (like the swords, for example) of significant chronological value – and this limits my conclusions considerably.

Among the elements of harnesses, I shall discuss the bits and the stirrups that are anyway the most frequent finds in graves (69 and 28 features, respectively).

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[25] In certain cases, when the exact place of discovery inside the grave is mentioned, one can infer more precisely the function of these items. Most often though such details are not clearly stated and thus I have only included them, with due caution, in the case of a single functional category.

The bits are made of iron and can be included in two large types: I. single-bar (41 items); and II. composite (11 items). The type of 17 items could not be identified, either due to the destruction caused by subsequent interventions or to the fact that they have only been preserved in fragments or even as fain traces of rust. Type I is characterized by a single-bar mouthpiece with turned ends, forming small eyelet that support the circular rings, most of them mobile (Pl. 2/I). Type II includes bits with the mouthpiece made of two bars with turned ends that form small eyelets that support the rings. Though smaller, this group includes four variants of rings and bit shanks: a. circular (Pl. 2/II.a); b. with slightly trapezoidal plates attached to the ends of the mouthpiece, pierced by an orifice supporting the mobile ring (Sadovoe) (Pl. 2/ II.b); c. with double eyelets at the ends of the mouthpiece, with the mobile ring going through the outer eyelet and with shank consisting of a bar ending in small knobs, with a rectangular piece of metal welded in the middle, pierced by an orifice and widening in the shape of a trapeze towards the bar, pierced by another orifice that allowed for the attachment to the inner eyelet of the mouthpiece (Grozeşti) (Pl. 2/II.c); d. with D-shaped rings (Pogoneşti) (Pl. 2/II.d). Both types have wider circulation in time and areas, covering and exceeding the period under investigation.

The stirrups are made of iron and according to shape (where the shape could be reconstructed or descriptions are available) one can distinguish four types: Type I. ovoidal, with two variants: I.a. rectangular eyelet for the straps, the lower part widened, with a vein in the middle (Pl. 3/I.a)[26]; I.b. with semi-oval eyelet, made through the heightening of the upper part, pierced by an orifice, the lower part widened, sometimes with veins on the margins (Pl. 3/I.b)[27]. Type II. circular; particular through the circular shape and the semi-oval eyelet for the straps. The lower part is widened and the upper part is heightened according to a semi-oval shape, pierced by a rectangular orifice (Pl. III/II).[28] Type III. trapezoidal (slightly deformed) with the upper part widened, pierced by a horizontally oblong orifice and the lower part widened, with veins on the margins (Pl. 3/III).[29] Type IV. D-shaped, with two variants: IV.a. with rectangular eyelet (Pl. 3/IV.a)[30]; IV.b. with semi-oval eyelet for the straps (Pl. 3/ IV.b).

From the category of weapons and military equipment I shall discuss the arrowheads, the worked bone plates, the lance heads, the swords, the axes, and the helmets.

Approximate 200 arrowheads have been preserved in the 71 features, in various states of preservation. According to the material they are made of, one can include them in two large groups: A. metal arrowheads and B. bone arrowheads. According to the manner in which they had been attached to the wooden shaft, the metal (iron) arrowheads can be divided in two large types: I. with spike for hafting and II. with socket.

According to the shape of the active part, inside the first group one can distinguish among at least eight variants[31]: I.1. rhomboidal[32]; I.2. leaf-shaped, usually ellipsoidal in section[33]; I.3. with three wings;[34] I.4. Y-shaped[35]; I.5. chisel (or fan)-shaped;[36] I.6. spindle-shaped; I.7. triangular, the only item has the edges very slightly curved towards the outside;[37] I.8. with median axis and two edges (Pl. 4/A.I.1–8).

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[26] Swietosławski 1990, 14, fig. 2/type БI (according to Fedorov-Davydov 1966); 15, fig. 4/type I (according to Kirpičnikov 1973); 17, fig. 6/type 6 (according to Antanavičius 1976); 18, fig. 7/type IV2G (according to Ruttkay 1976); 37, fig. 18/type IIIA (according to Swietosławski 1990); Jotov 2004, 147–149, fig. 86–87; 157, fig. 27/ type 5A.

[27] Swietosławski 1990, 14, fig. 2/type ДII (according to Fedorov-Davydov 1966); 15, fig. 4/type VII (according to Kirpičnikov 1973); 16, fig. 5/type 5 (according to Pletneva 1973).

[28] Swietosławski 1990, 14, fig. 2/type EIII (according to Fedorov-Davydov 1966); 15, fig. 4/type V (according to Kirpičnikov 1973); 16, fig. 5/type 6 (according to Pletneva 1973); 37, fig. 18/type IVD (according to Swietosławski 1990).

[29] Somehow similar to type X according to Kirpičnikov, Medvedev 1985, 360, table 146/24, but due to existing deformations it cannot be included with certainty in any of the above mentioned typologies, as it is different from the other trapezoidal stirrups from the European area. One nevertheless cannot exclude the possibility that originally it was even an ovoidal stirrup (type I.b).

[30] Swietosławski 1990, 14, fig. 2/type BII (according to Fedorov-Davydov 1966); 15, fig. 4/type VIIa (according to Kirpičnikov 1973).

Type II. barbed head, having the following variants: with simple socket (Liman T.2/G.9 and Ştefan Vodă T.1/G.1a) and twisted socket (Milostea T.6/G.11) (Pl. 4/A.II.1–2)[38].

I have included in group B, much smaller, eight bone arrowheads discovered in three features (Kamenka T.5/G.1; Trapovka T.1/G.2; Ursoaia T.2/G.2) (Pl. 4/B.a-b). The bone arrowheads form a special type, conical in shape without an actual spike or tube for hafting, but a hole where the wooden shaft was inserted[39].

The worked bone plates were usually bow reinforcements, but could have had other uses as well. Such bone plates were found in 41 graves, between 1 and 5, even 7 in one feature. Though specialists still debate the role of the worked bone plates[40], one can state with certainty the fact that many of them (at least 30 cases) were reinforcing elements of composite bows.

The oblong plates that display a notch on one end are from the tips of the bow, as the notch held the string in place (Pl. 4/2a-b), while those usually elongated oval in shape were fixed to the central part of the bow (Pl. 4/1a-b).[41] Some also believe that such bone plates were used as quiver fasteners, forearm protection plates or, in other situations, elements with a simple decorative role in the ornamentation of bows, quivers, or saddles (Pl. 4/3–5). Some of them are decorated with incised circles with central dot or concentric circles that form various combinations of rows, and the motif is often encountered on wide areas[42]. Worked bone plates with various uses do not benefit from a strict chronology and are generally encountered in the graves of Turanic riders,[43] but also Magyars[44] and others.[45] On the territory of Bulgaria archaeologists discovered worked bone plates coming from the bows in various contexts dated to the 8th–12th centuries[46].

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[31] Another classification of some of the arrowheads could take into consideration the section shape of the active part – the most frequent ones are ellipsoidal, but one also encounters rhomboidal ones.

[32] Ruttkay 1976, 327, fig. 54, group B, type 2a, 2b; 330; Kirpičnikov, Medvedev 1985, 347, table 135/5; 348, 350, table 137/4–5; Jotov 2004, 25, fig. 3/type I4AB; 27–28.

[33] Ruttkay 1976, 327, fig. 54, group B, type 1a; 329; Kirpičnikov, Medvedev 1985, 347–348, table 135/10; Jotov 2004, 25, fig. 3/type I1B.

[34] Ruttkay 1976, 327, fig. 54, group B, type 6; 331; Kirpičnikov, Medvedev 1985, 349, table 136/10; Jotov 2004, 25, fig. 3/type II4A; 30.

[35] Type 60 according to: Kirpičnikov, Medvedev 1985, 348, 350, table 137/13 and 352, 354, table 140/6; Jotov 2004, 29; table XXI – type 7A – no. 303–311.

[36] Type 55 according to: Kirpičnikov, Medvedev 1985, 348, 350, table 137/7.

[37] Medvedev 1966, 157, table 23/13; 163, table 26/4–5.

[38] Ruttkay 1976, 327, fig. 54, group A, type 1a, 1b; 328.

[39] Jotov 2004, 31; table XXV – no. 386–388; Sergeeva 2010, 222; Rudenko 2003, 193/table 22/7.

[40] See Fliorova 2000, 101–116 for a good analysis of the categories of plates, correlated with their development, in a series of graves from Belaja Veža dated between the end of the tenth century and the beginning of the twelfth century. The author also mentions that the use of bone plates (for bow or quiver) seems to have ceased towards the middle of the thirteenth century.

[41] Kirpičnikov, Medvedev 1985, 344, table 132.

[42] See for example the Altai plates decorated in this manner, identical to the items discovered in the area under investigation (Mogilnikov 2002, 239; fig. 108).

[43] Spinei 1985, 121, 206, fig. 34/8–11; 207, fig. 35/19–20, 23–25, 36–37; 208, fig. 36/22–26, 28; 210, fig. 38/37–38, 40, 42; Medvedev 1966, 120–130, table 3/2–6; 5/10; 6/7–9.

[44] Gáll 2013, p. 889–890.

[45] Ştefan *et al.* 1967, 342; fig. 183/1–25; For the multitude of bone plates with various functions (as well as other bone items) from old Kiev (tenth-thirteenth centuries), see: Sergeeva 2010, 223–228.

[46] Jotov 2004, p. 17–21; table I-III.

Swords/sabers (Pl. 5/A). Unfortunately, one can make almost no typological observations on the 16 items that the various authors mention as belonging to the category of swords. In most of the cases the items could not be recovered due to the conditions of discovery or their state of preservation, or they were fragmentarily preserved, usually just part of the blade. The only iron sword published accompanied by illustration and description (due to its state of preservation it could not be recovered) has been discovered in Ştefan Vodă T.1/G.1. The sword measured 108 cm, had a corroded guard (the exact shape of which can be no longer identified), probably plated with bronze or silver, and the blade slightly curved. It is characterized by a handle tilted towards the cutting edge at an angle of 165^0 as compared to the axis of the blade and with a cylindrical pommel. The sword was found in a wooden scabbard with an iron chap that was ellipsoidal in shape and had a vertical vein. Taking into consideration the characteristics of the item (especially its length) and a series of analogies from the eastern area,[47] I tend to believe that the item from Ştefan Vodă T.1/G.1 is to be dated to an interval of a couple of decades between the end of the 12th century and the first half of the 13th century.

The 11 iron lance/spear heads were found in seven graves and all are of the socketing shaft type. According to the shape and dimension of the active part, one can distinguish between several subtypes: 1. lance head with a narrow, oblong active part that is still shorter than the socketing shaft (Jilava; Grădiştea G.11a – two items, different in size) (Pl. 5/1);[48] 2. lance head with the active part narrow, leaf-shaped, with a median vein, much longer than the socketing shaft; the latter is octagonal, faceted, with a thickened base and a perforated wide extension[49] (Milostea T.6/G.11) (Pl. 5/2); 3. lance/spear head, with the active part conical in shape, with a "girdle"-like thickened part at the base of the socketing shaft (Dzinilor T.3/G.5 – four items).

Iron axes with transversal socketing hole were found in four graves and can be included in the following three types: Type I consists of axes with pointed wings around the socketing hole with oblong butt, narrow body and very slightly flattened blade[50] (Bucureşti *Lacul Tei*) (Pl. 5/I). Type II consists of axes with thickened and oblong edge, narrow body and triangular blade[51] (Vităneşti T.2/G.2) (Pl. 5/II). Type III includes axes with the body widened in an approximately triangular shape towards the blade; the butt is a bit oblong, with a flat edge and small sleeve around the hole[52] (Hîrtopul Mare) (Pl. 5/III). The first two types are mainly characteristic to the 8th–11th centuries and the third to the 13th–14th centuries.

Iron helmets were found in three graves and the only item that can be analyzed was discovered in Moscu (Pl. 5/B). The item is made of iron plated with silver, spherical-conical in shape, characterized by a nose guard with a stressed area above the eyes and the tip not very tall. Such items – spherical-conical in shape with rhomboidal nose guard – follow models from the Russian duchies and were used during the 12th–13th centuries[53].

Belt / strap buckles, of various shapes and sizes, made of different materials, are among the most often encountered artifacts during all eras. There is the possibility, reflected by the archaeological context, that some of the buckles under discussion were part of the harnasses. Due to the fact that no significant typological differences can be noted between the buckles use a dress accessories and those part of harnasses, I have included in this group all of the items known so far. The 65 buckles fund in 47 grave are made out of iron – 50 items, bronze – 12 items, silver (or billon) – two items, and bone – one item. According to the manner in which they were attached to the strap, the buckles can be divided into three large types: I. with single loops; II. with double loops; III. with strap plate.

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[47] See similar items in: Kirpičnikov 1966a, 96 – no. 53; table 34/4; Kirpičnikov, Medvedev 1985, 335, table 123/8; Pletneva 2003, 225; fig. 49; Naročnyj 2005, 101–104.

[48] Kirpičnikov, Medvedev 1985, 337, table 125/type III6; Ruttkay 1976, 299, fig. 36/type Va; 301–302; Kirpičnikov, Medvedev 1985, 337, table 125/type IV14; 338, table 126/12.

[49] Kirpičnikov, Medvedev 1985, 337, table 125/type IVA (no. 22), such an item was found in Novgorod (338, table 126/13); Jotov 2004, 79; table LXI, type I A – no. 503.

[50] Emandi 1981, 29–31, fig. 1/1, 4; Jotov 2004, 89, fig. 16/type 7C; 100.

[51] Emandi 1981, 35–36, fig. 6/1, 3–4; Kirpičnikov, Medvedev 1985, 339, table 127/16; Jotov 2004, 89, fig. 16/type 6; 99–100.

[52] Emandi 1981, 40–42, fig. 10–11.

[53] Fedorov-Davydov 1966, 33–35; fig. 5/1, type. V; Kirpičnikov, Medvedev 1985, type IV, 355, table 141/6; 356, table 142/2; Spinei 1974, 409, with analogies and literature.

Type I consists of buckles with simple loop (with or without preserved median pin), in with six shape variants: I.1. round; I.2. oval; I.3. rectangular; I.4. oval with the long sides bent inwards; I.5. D-shaped; I.6. horseshoe-shaped (Pl. 6/I.1–6). Variants of type I are frequently encountered, in different archaeological context, ever since the Early Middle Ages, and were in use until late, in both time and areas.

Type II includes double-looped buckles and has three categories: II.1. lyre-shaped, with two variants: II.1.a. with an ellipsoidal upper part (in five graves) (Pl. 6/II.1.a.1-5); II.1.b. with a semicircular upper part (in five graves) (Pl. 6/II.1.b.1-3). II.2. 8-shaped (Novoselskoe T.12/G.2) (Pl. 6/II.2). II.3. bone buckle, almost rectangular in shape, with the upper part rounded and provided with a grooved pin rest; the pin is missing; the lower part is marked by two alveoli, the inner side of the upper part is cut out in an almost hourglass shape, while the inner side of the lower part is oval (Červonoarmejskoe T.1/G.1) (Pl. 6/II.3). Lyre-shaped buckles, with a diverse typology, are generally spread throughout Eastern Europe, among the Turcik populations, the Finno-Ugric, Slavic, and Baltic populations, and seem to have originated in the Orient. Such items have been found in Central Asia, along the Volga and the Don, in earlier features than in the rest of Europe[54]. Type II.1.a is mainly dated to the 10th–11th centuries, while type II.1.b. was mostly in use during the 12th–13th centuries. The bone buckle is a unique piece for the area under discussion here and it is possible that due to its anteriority and similarity it served as model for the lyre-shaped buckles. In farther regions, such as the Altai[55] during the 9th–11th centuries or in western Kazakhstan[56], they were frequently employed. Numerous bone buckles are encountered among the Turcik populations in Central Asia during the 6th–8th centuries, used for the strapping of saddles[57].

Type III buckles with strap plate, with two variants according to the shape of the loop: a. heart-shaped / oval (Bădragii Vechi/Noi T.3/G.7; Trapovka T.10/G.9) (Pl. 6/III.a.1-2); b. D-shaped (Novoselskoe *Ciauš* T.13/G.1) (Pl. 6/III.b). The two buckles with heart-shaped plates, made of gilded silver or billon, were parts of belts consisting of 40 pentagonal appliques, namely 32 drop-shaped appliques. On the basis of these richly decorated sets directly inspired by Byzantine art, the item sunder discussion (an implicitly the features in which they were found) can be dated to the 10th–11th centuries[58]. The second, much simpler variant, was made out of bronze, in the present cases dated to the 13th century.

Earrings (and/or temple rings). The existence of three main types has been noted in the case of this category of jewelry items that were found in 35 features. The earrings are made of gold (11 cases), silver (12 cases), bronze (11 cases), and lead (one case). Type I ring-shaped with four variants (Pl. 7/I.a-d): a. circular in section (in 28 graves); b. square in section (Bârlad "Moara lui Chicoş"; Burlăneşti T.5/G.1); c. twisted (Holboca G.26); d. consisting of a thin wire coiled as a spring (Vladyčen "Mresnota moghila" G.10). Type II items have a spherical body attached to the ring (in three graves) (Adâncata G.7; Červonoarmejskoe T.1/G.1; Grădiştea G.11b) (Pl. 7/II). Type III items have the shape of a question mark and the only preserved item has a thin wire twisted around its body, and is made out of bronze (Hîrtopul Mare) (Pl. 7/III). Ring-shaped earrings (type

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[54] Ioniţă, Spinei 1972, 309, 312.

[55] Mogilnikov 2002, 345; fig. 209/9–10, 12–15, 19–20, 23–25.

[56] Bisembaev 2010, 109, fig. 7/4.

[57] Stark 2008, 529; Abb. 63, a/1–12.

[58] Curta 2013, 163, 184–185, fig. 2–3.

I), made of different materials, are distributed over a wide area and used during a wide interval. These items are extremely common and lack chronological relevance, so that the indication of the analogies is almost useless[59]. Type II is encountered in Moldova[60], Hungary[61], Russia[62], and south of the Danube in: Dobrudja[63], Bulgaria[64], Serbia[65] and circulated during the 10th–15th centuries, possibly even later[66]. Type III was generally spread to the south-eastern part of Europe during the 12th–13th centuries and even later, with a lot of variants[67]. Question mark-shaped earrings are also encountered among the Turanic tribes from the steppes of Eastern Europe during the 11th–13th centuries[68] and subsequently, during the period of the Golden Horde.

Beads made of different materials were found in 15 graves. They had various shapes (barrel, disk, cylinder, heart, bi-cone, sphere, mushroom, or irregular), sizes, and colors (green, blue, whitish, black, reddish-brown with yellow spots, transparent, multicolored). Most of the beads are made of glass, but some are coral, bronze, stone, and bone, worn part of necklaces (Pl. 7/2.a-g). There is also one case when a glass bead was set on a thin bronze wire necklace with one end bent like a hook and the other bent forming an eyelet (Corjeuţi T.7/G.2) (Pl. 7/1). The result was thus a new jewelry piece, a collar necklace, different from the usual beaded necklace – for the time being a unique piece in the funerary world of the Turanics in the area under analysis. Glass beads, of various dimensions, shapes, and nuances, are encountered during the 10th–14th centuries over wide areas, starting from south of the Danube and extended to old Russia,[69] as this type of jewelry item was worn by all of the era's populations.

Pendants and/or buttons. Eight types of pendants have been identified in the 42 graves that contained this category of items. Most of the 81 pendants were made out of bronze and/or copper, two out of silver (one also gilded) and one each of iron, some kind of paste, and shell.

Type I consists of globular or oval-shaped items and includes two variants according to the presence or absence of ornaments on the body of the pendants. I.a. simple, consisting of two welded semi-spherical domes with an attached loop (21 items in 13 graves) (Pl. 7/I.a); I.b. decorated (12 items in six graves) (Pl. 7/I.b.1-3). Items similar to those included in type I, with small variations in size, can be encountered frequently during the 11th–12th centuries, and were sometimes also used as buttons[70].

Type II is pear-shaped, made out of cast bronze, with radial incisions in the lower part (Chilia) (Pl. 7/II). This type of items was used throughout the Middle Ages, especially as buttons.

Type III is bell-shaped (38 bronze items in 19 graves) (Pl. 7/III). They are almost globular in shape, with a cross-shaped cut in the lower part and decorated through incised parallel lines. The inner ball is also preserved in some cases. Just like the globular and/or oval-shaped pendants, bell pendants could have also been used as buttons, though their number in a feature is not necessarily an argument toward this use. Such jewelry items circulated during the 10th–12th centuries and are encountered over a wide area, by predilection in the graves of Turanics, but also Magyars and others.[71]

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[59] Dumitriu 2001, 30.

[60] Trifeşti (Spinei 1982, 241, fig. 2/18–19).

[61] Szabo 1938, 45–46; Szent Lászlo I (Vána 1954, 69, table 4/23).

[62] Sarkel (Pletneva 1963, 253, fig. 26/3).

[63] Păcuiul lui Soare (Diaconu, Baraschi 1977, 123, fig. 97/21–24; 124); Nufăru (Damian 1993, 100, fig. 11/3; 101–102).

[64] Seuthopolis (Čangova 1972, 111, fig. 91/3–4, 6); Lukovit-Mušat (Jovanović 1987, 114, table 1/9–10; 115, table 2/ not numbered; 119, table 4/ not numbered; 122, table 5/95).

[65] Breštovik (Ćorović-Ljubinković 1956, 135, fig. 4/ not numbered); Trnjane (Marjanović-Vujović 1984, 162; pl. 14/1).

[66] Damian 1993, 102.

[67] On the variants with analogies and the corresponding literature, see Ioniţă 2005, 82.

[68] Pletneva 1981, 259; fig. 82/115–116.

[69] Damian 1993, 92–95, with the literature on the issue as well.

[70] Ştefan *et al.* 1967, 280–283, fig. 169/16.

Type IV is leaf or heart-shaped and four such items were found in three graves (Pl. 7/IV.a-c). All of the items are made of bronze through openwork (Bereşti "Chirvase" (G.B); Palanca T.1/G.26; Todireni "CAP" (G.B) – two items). Pendants of this type seem to have been a creation of the Petcheneks settled in the area of the Lower Danube during the 11th century, on the basis that most of the discoveries (a good part of which had a funerary character) are focused there.[72] Pendants of this type were also found, naturally, between the Dnieper and the Volga[73] or even further, in Kazakhstan, where historian believe they belong to the Oguzhan-Petchenek Period[74]. One thing seem certain in connection to the chronology: leaf / heart-shaped pendants feature in the area under investigation sometime during the 10th century and are encountered, at the latest, in features that can be dated in the beginning of the 12th century, thus covering the period of Petcheneks domination.

Type V – paddle-shaped (Todireni "CAP" (G.B). The only item of this type is made out of bronze, decorated through the incision of 12 circles with central dot placed in groups of four in three rows (Pl. 7/V). I am unaware of similar bronze items, as such pendants are extremely rare. Still, there are bone versions and depictions of stone statues attributed to the late nomads.[75]

Type VI consists of two square plates decorated with geometric motifs, made of gilded silver (Pl. 7/VI). The item in question was preserved in a small wooden box covered with a cloth (Selişte G.53b). It is a singular pendant model, a reflection of the influence that the Golden Horde over the dress fashion and habits of the Turanics starting with the middle of the 13th century.[76]

Type VII – *Kauri* shell (Chilia) (Pl. 7/VII). Jewelry items made of individual shells (such as, for example, Cypraea Spondilus), set in rows consisting exclusively of shells or in combination with beads made of other materials, are frequently encountered over wider areas, in the inventories of graves dated to the 10th–13th centuries.

Type VIII – cross-shaped, made out of a dark paste (Kamenka T.5/G.1). I am as yet unaware of analogies for this type of pendant that is a novel element among the Turanic jewelry items.

Bracelets. A single type of bracelet – consisting of twister bronze wires (Mirnopole) (Pl. 7/3) was found in one of the three Turanic graves that contained this category of jewelry. In the two other cases one cannot make typological considerations due to the lack of data. Such bracelets, also called "twisted bracelets", are often encountered between the eleventh and the 13th century in the South-Danubian world, the area of the Middle Danube, but also in Eastern Europe.[77]

Iron strike-a-lights have been found in 32 features, most often accompanied by flint flakes as well. Among them, a maximum number of 19 can be analyzed, as the other 13 are fragmentarily preserved or no description or illustration is available. According to shape, one can identify four types: Type I is bracket-shaped, with two variants: I.a. flattened-ellipsoidal, closed, with tips pulled prominently outwards, ending in concentric wraps and touching (Pl. 8/I.a); I.b. with curved arms having volute-shaped rolled ends, not touching (Pl. 8/I.b.1-2). Type II – oval-shaped, with the ends touching or set slightly apart (Pl. 8/II). Type III – B-shaped (Lişcoteanca "Movila Olarului" G.9) (Pl. 8/III). Type IV – rectangular (Hîrtopul Mare) (Pl. 8/IV). Iron strike-a-lights type I and

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[71] Spinei 1985, 111, 113–114, 118, 121; Artamonova 1963, 57, 135, 138, 147, 156; Dumitriu 2001, 50.

[72] Archaeologists have recorded 35 items on 18 sites, 29 from 13 settlements located in Dobrudja and the north-eastern part of present-day Bulgaria, while the other six were found on five sites located north of the Danube (Curta 2013, 168–169, 189–190, fig. 6–7, and passim with the literature on the issue).

[73] Spinei 1973, 282–292; fig. 6; 7.

[74] Bisembaev 2010, pl. 3/1 (UOIKM Funds).

[75] Spinei 1973, 278–282, with the discussions and the few existing analogies; Spinei 1974, 411.

[76] The inventory of that grave also included a silver mirror (specific to the Golden Horde Era), while G.52 located in proximity contained silver plates with Arab letters.

[77] Dumitriu 2001, 64–65, also with analogies and the literature on the issue.

II display an inwardly thickened/widened part in the central segment of the bar they are made of. This part is usually semicircular, but can also be, in rarer cases, trapezoidal or triangular. In one case, an iron strike-a-light displays even three such thicker parts (Costeşti T.1/G.10) (Pl. 8/I.b.1). Iron strike-a-lights of various shapes have been widely distributed in both time and areas. Types I and II are the most used, encountered in Eastern Europe among the Finno-Ugric, Baltic[78], and Turanic tribes[79], in the world of the Russian duchies[80], in Central Europe[81], as well as in South-Eastern Europe[82], among all of the populations inhabiting these regions during that era. Type III circulated starting with the 12th century and was in use until later during the Middle Ages[83], mainly in the area of the Lower Danube in: Dobrudja[84], Bulgaria[85], but also slightly northwards, on the territory of Moldavia[86]. Type IV circulated starting with the 13th century and was in use throughout the Middle Ages[87], encountered in different archaeological features.

Iron scissors, similar in shape with those used nowadays, have been discovered in four graves (Adâncata G.7; Grădiştea G.11b; Gura Bîcului T.1/G.1; Olăneşti T.2/G.2) (Pl. 8/2.a-b). The items in question consist of two blades attached in the middle with a rivet, with handles bent in a semi-circular or oval shape. According to their contexts of discovery, the items under discussion can be dated to the 12th–13th centuries. Iron scissors are encountered in Eastern Europe as inventories of graves dated to the 10th–13th century[88], but they are absent from the Carpathian Basin. In Western Kazakhstan they are characteristic to the funerary fashion of the 12th–14th centuries[89]. The same scissor shapes were also encountered by the Bulgarians along the Kama[90].

Metal cauldrons have been discovered in four graves (Bereşti G.A, Făleşti, Lieşti T.78/G.8, Pogoneşti). Due to the conditions of discovery, a single item, found in Pogoneşti, could be analyzed. It can be included among the tronconic copper cauldrons (Pl. 8/1). Its best parallel is the cauldron from the hoard in Plopu (Prahova County) that can be dated, based on the coin hoard found inside it, to the final quarter of the 11th century[91]. One cannot exclude thus the possibility that the item in Pogoneşti dates to the same century. Other metal cauldrons from the 11th–13th centuries have been discovered among the funerary inventory of T.136 in Sucleia[92] and of G.2 in the necropolis from Mateuţi "Şcoala Nouă" (Republic of Moldova)[93] and in the deposit of tools and weapons from Vatra Moldoviţei "Hurghişca" (Suceava County)[94]. Copper cauldrons with iron handle were also found in the "late graves", dated to the 12th–13th centuries from Sarkel (Ukraine) [95]. Various types of metal cauldrons are also encountered in other regions of Eastern Europe[96]. One must also mention the fact that tronconic copper cauldrons such as those in Pogoneşti or Plopu have been the models for clay cauldrons[97] – but this a distinct topic, one worth of an individual discussion.

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[78] Sedov 1987, 253, table 5/36; 309, table 61/3; 318, table 70/19; 322, table 74/22; 338, table 90/16; 340, table 92/10; 450, table 131/43.

[79] Pletneva 1958, 157, fig. 3/3, 9; 158, fig. 4/3–4, 11; 168, fig. 8/4–6; 178, fig. 14/3.

[80] Novgorod (Kolčin 1959, 101, fig. 84/1–6; 103, fig. 85; Kolčin, Janin 1982, 163, fig. 4/40, 61); Beloozero (Golubeva 1973, 125, fig. 44/20; 126).

[81] Tulln (Friesinger 1971, 255–256; fig. 10; 12/3; 14/2); Nitra (Čaplovnič 1954, 50, fig. 16); Pilin, Kecskemét (Vána 1954, 75, fig. 7/19, 21); Poland (Zoll-Adamikowa 1966, 170–171; table 11/1–3, 5–6).

[82] Capidava (Florescu *et al.* 1958, 233–234, fig. 116/1); Galiţa, Păcuiul lui Soare (Diaconu 1972, 319, fig. 1/1–3); Pliska (Stančev 1955, 205, fig. 23/3); Gabrovo (Milčev, Kojčeva 1978, 60; fig. 15).

[83] Diaconu 1972, 317–323.

[84] Garvăn-Dinogetia (Ştefan *et al.* 1967, 73–76; fig. 38/27; 39/19); Păcuiul lui Soare (Diaconu 1972, 319; fig. 1/4).

[85] Seuthopolis (Čangova 1972, 89, fig. 69/6); Gabrovo (Milčev, Kojčeva 1978, 55; fig. 8); Šumen (Antonova 1975, 29–30; fig. 16/8); Târnovo (Nikolova 1974, 240, fig. 60).

[86] Hlincea (Petrescu-Dîmboviţa *et al.* 1955, 698, fig. 8; Spinei 1985, 212, fig. 40/10); Murgeni (Coman 1980, 187, 373; fig. 163/4); Baia (E. Neamţu *et al.* 1980, 61–62, 185; fig. 33/2); Hansca *Căprăria* (Hâncu 1973, 12–13; fig. 8/1).

[87] Kolčin, Janin 1982, 163, fig. 4.

[88] Pletneva 1958, 157–158, 180; Pletneva 1963, 251.

[89] Bisembaev 2010, 136.

[90] Rudenko 2001, 182.

[91] Ioniţă, Ciupercă 2003, 177–184.

[92] Dobroljubskij 1984, 168.

[93] Hâncu 1969, 163–166.

[94] Spinei 1985, 237, 461; fig. 27/5.

Padlocks were found in two features (Višnevoe T.54/G.5; Selişte G.52). The two items are almost identical – cylindrical in shape, made of iron and copper (Pl. 8/4). Such items, type V (*Tun B*) according to Kolčin[98], seem to have circulated in Eastern Europe starting with the 12th century. They are frequently encountered in various archaeological environments, such as the settlements of the Bulgarians along the Kama[99]. The present context of discovery dates them to the 13th century, but cylindrical padlocks had a much wider circulation, in both time and space[100].

A single mirror was found, in one grave (Selişte G.53b). It is a round piece of silver, decorated on one side with a motif consisting of four pairs of 3-shaped lines, set front to front (Pl. 8/3). Mirrors reappeared as inventory items in graves in the area under analysis[101] under the influence of the Golden Hoard, but in features from the eastern regions they also feature in earlier features. Thus, taking this under consideration, as well as the production peculiarities[102], the analogies among the discoveries made on the left bank of the Dniester, one can date the mirror from Selişte to the second half of the 13th century or even to the beginning of the subsequent century.

I should remind the fact that approximately half of the graves envisaged here contained no inventory and are thus excluded from the discussion of dating them with the aid of artifact categories. Thus, in their case, but also of numerous features that contain different inventory items, one wonders if the presence of two or more graves in one tumulus is an argument supporting their inclusion in the same chronological phase or not. What about the graves inside tumuli located close together – can they be considered contemporaneous?

Despite the several dozen types of artifacts present in the graves of the Turanics, one can note, in general, a certain dullness of the items as compared to the archaeologists' desire of as narrow as possible a chronological identification.

There are very few graves with inventories that allow for a dating narrowed down to several decades. Among them one the grave in Suvorovo, the only containing coins (13 concave billon coins: Manuel I Komnenos (1143–1180) – 10 items, Andronikos I Komnenos (1183–1185) – one item, Isaac II Angelos (1185–1195) – two items)[103], which dates them around the year 1200. One can date the grave in Moscu[104] that can be similarly dated, as the helmet it contained – a truly exceptional item – supports its dating to the first half of the 13th century. The period between the end of the 12th century and the middle of the 13th century also includes the double grave T.1/G.1-G.1a in Ştefan Vodă, dated thus based on the characteristics of the sword (especially its length) from G.1[105]. One can also add the graves in Selişte (G.52, G.53) that can be dated to the second half of the second half of the 13th century based on the presence of certain silver plates with Arab letters, the mirror, and the pendant. The other grave in proximity (G.51) was very likely contemporary. The grave in Hîrtopul Mare belongs to the same period of domination of the Golden Horde. It has been thus dated due to the association between the different types of inventory items – question mark-shaped earring, rectangular iron strike-a-lights, and axe.

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[95] Pletneva 1981, 216, 259, fig. 82/105–106.

[96] See a typology of metal cauldrons from the regions of the Volga and of the Kama in: Rudenko 2000, 104.

[97] Clay cauldrons have adopted the tronconic shape and some of the production details of the copper cauldrons. Thus, elements such as the rivets and the meeting of the bottom and the walls, through the technique of caulking have been incised in clay. These observations were made on the clay cauldrons from Dridu "*La Metereze*" (Ioniţă 1998, 310.)

[98] Kolčin, Janin 1982, 162, fig. 3 (*Tun B*).

[99] Rudenko 2001, 177.

[100] Neamţu *et al.* 1984, 76–77, with analogies and literature especially for the items dated to the 14th-15th centuries.

[101] Mirrors have also been encountered during an earlier period in Sarmatian funerary features.

[102] Though through decoration they are not similar to any of these, see nevertheless the types of mirrors used during the era in: Fedorov-Davydov 1966, 78–84.

[103] Dobroljubskij, Stoliarik 1983, 71–73; Spinei 1985, 117, 209; fig. 37/1–2, 5–8.

[104] Spinei 1974, 397–399; fig. 5–6; 10/11; Spinei 1985, 114, 203, 221; fig. 31/14; 49/3; Ursu 2010, 170, 173; fig. 3.

[105] Vysockij 1992, 34–35, 37–38, 73–75, 77; fig. 28–30.

Unfortunately, some of the items with good chronological value come from graves found by accident and cannot be correlated with certainty with elements of funerary ritual or, sometimes, not even with other artifacts that were reportedly found in the graves but could not be recovered.

There are problems even in the case of artifacts published as having clear datings in the archaeological literature, as time delays could exist between different geographical areas, set closer or farther apart. They date the features in which they were found in Central Asia differently than in the Lower Danube – and this is somewhat logical but not necessarily, due to the immense distances. One similarly encounters the phenomenon of narrower datings in one area and wider in another. The best example consists of graves from the Carpathian Basin, dated precisely to the 10th century and the beginning of the 11th century. It would be an error to hold this dating as a chronological model also for the similar items found in graves outside the extra-Carpathian area[106], but they can sometimes be interpreted as indications or at least tendencies. The explanation is simple: after the year 1000 such items were no longer placed in graves, following the Christianization of the Magyars, but they remained in use, less visible archaeologically than they had been as part of the funerary inventories. It is thus not the items that disappear, but the habit of their deposition in graves – a phenomenon that never took place in the extra-Carpathian area, where burials with horses, elements of harnesses and weaponds or military equipment continues until the 13th century (and even in the fourteenth).

By comparison with the Carpathian Basin one naturally notes a series of similarities, but also differences and peculiarities, between the burials made here between the 10th century and the beginning of the 11th century[107] and those made in the area under investigation. The major difference resides in the fact that in the Carpathian Basin the burials were plane, while in the extra-Carpathian area they were almost always in pre-existing tumuli or other mounds, prehistoric *tell*-settlements, or natural earth elevations. Another observation that must make envisages the fact that although the items circulating during this era are similar from a typological perspective, composite bits were used in almost 90% of the graves inside the Carpathian Basin and single-bar bits feature in circa 80% of the features created by the Turanics between the Carpathians, Danube, and Dniester. Swords/sabers and stirrups were also much more often deposited in graves from the Carpathian Basin than in those of the area under investigation. The ornaments on harnesses elements are also most often encountered in the funerary features from the Carpathian Basin. The most similar elements of rituals between the two geographic regions consist of the deposition of horse body parts (exclusively the skull and the extremities of the legs in the Carpathian Basin) [108], the position of the human body, the position of the members and the orientation of the deceased (according to the standard presented above), and the frequency of arrowheads (predominantly rhomboidal) in graves. I shall also mention the fact that regarding the jewelry items, the two areas display slightly different preferences, both in numbers and for certain types of earrings (such as those with S-shaped-turned ends that are only encountered in the Carpathian Basin), bracelets and finger rings (much more numerous and typologically diverse in the Carpathian Basin), dress appliques (shirt-neck mountings and/or smaller cloth mountings only exist in the Carpathian Basin), pendants (such as heart-shaped pendants with openwork inside are only encountered outside of the Carpathian Basin) etc. This topic deserves a separate and detailed discussion, so that I stop here the list of comparisons hoping that the directions I have sketchily indicated have cleared certain confusions, more or less random.

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[106] See such methodological errors, imprecisions and confusions regarding artifacts in the attempt to chronologically order the graves in Moldavia. Existing publications mention bracelets rectangular in section instead of temple rings in Bârlad "Moara lui Chicoş" (Vaslui County); digital ring with twisted bar instead of earring/temple ring in Holboca G.26 (Iaşi County); iron cauldron instead of copper cauldron in Pogoneşti (Vaslui County) – and the author comment upon them as significant elements of dating for the 11th century. Probably also influenced by the presence of the composite bit in several discoveries from Moldavia (items almost always present during the 10th century in graves from the Carpathian Basin as well), E. Gáll gets to include all 29 graves between the Carpathians and River Prut in the period 900–1100, though some of the graves, such as the one from Moscu (Galaţi County), also contained artifacts well-known for their later dating (a 12th–13th centuries helmet): Gáll 2015, 316–317.

[107] On the burials in the Carpathian Basin – Transylvania, Banat, and Partium – see: Gáll 2013.

[108] On the habit and position of deposition of horse remains among the Magyars, see: Bálint 1982, 7–35.

Regarding the attempt to date the graves, and all initiatives of this type must be regarded with much caution and reservation, I have followed, in general terms, the chronology developed by G. A. Fedorov-Davydov[109] adapted to the area under investigation. According to Fedorov-Davydov, the era in question can be divided into four larger chronological phases that correspond to the periods in which various populations dominated the North Pontic steppes: I. end of the 9th century – the 11th century (Petcheneks and other Turkic populations – Uzes, Berendes); II. last quarter of the 11th century – the 12th century (Cumans / Polovtsy / Kipchak); III. end of the 12th century – the middle of the 13th century (pre-Mongolian Cumans); IV. second half of the 13th century – the 14th century (Cumans, "Black skull-caps" / "Khlobuks", Alans / Jasz) during the period of the Golden Horde).

In absolute and, naturally, conventional dates, these phases correspond to: 896 – the Magyars were driven away and the Petcheneks set in – 1065/1066 – the invasion of the Uzes – 1122 – the invasion of certain "Scythians" (either the final Petcheneks tribes or Cumans)[110] in the Byzantine Empire, the defeat of whom gave birth to the so-called "Petcheneks festival" – 1241 – the Great Mongol Invasion – 1312 – the end of Tokta's rule (1290–1312), the final khan of the Golden Horde known for his religious tolerance.

The attempt to date the graves with inventory, performed with due caution, can be thus described (Fig. 8.):

21 graves belong to phase I (end of the 9th century–the 11th century) – from an ethnical perspective they can belong especially to the first Turanics who arrived in the region under discussion – Petcheneks, but also other Turkic groups – Uzes, Berendes.

The largest lot of graves – 108 – belong to phases I and II (the 11th–12th centuries), as finer chronological identifications cannot be made. These graves might belong mainly to the Petcheneks and the Uzes, and to a certain degree to the new lords of the North Pontic steppes, the Cumans.

Only 42 graves date to phases II-III (12th century – the middle of the 13th century) and they could belong to the Cumans before the Mongol Invasion.

A group of 70 graves can be include in phase IV (the second half of the 13th century – the beginning of the 14th century), belonging to various populations – Cumans, "Black skull-caps", Alans etc. under the domination of the Golden Horde.

The final group consists of 32 graves that one can date, on the basis of their elements of chronology, generally, to phases I-IV. There are also nine graves without sufficient chronological indications – they could belong to any of the four phases, but also to other historical eras.

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[109] Fedorov-Davydov 1966, 9.

[110] For the end of the first phase / the beginning of the second phase one can also take into consideration the year 1091 – the battle of Lebunion – after which historians believe that the power structure of the Petcheneks at the Lower Danube disappeared and the power structure of the Cumans set in.

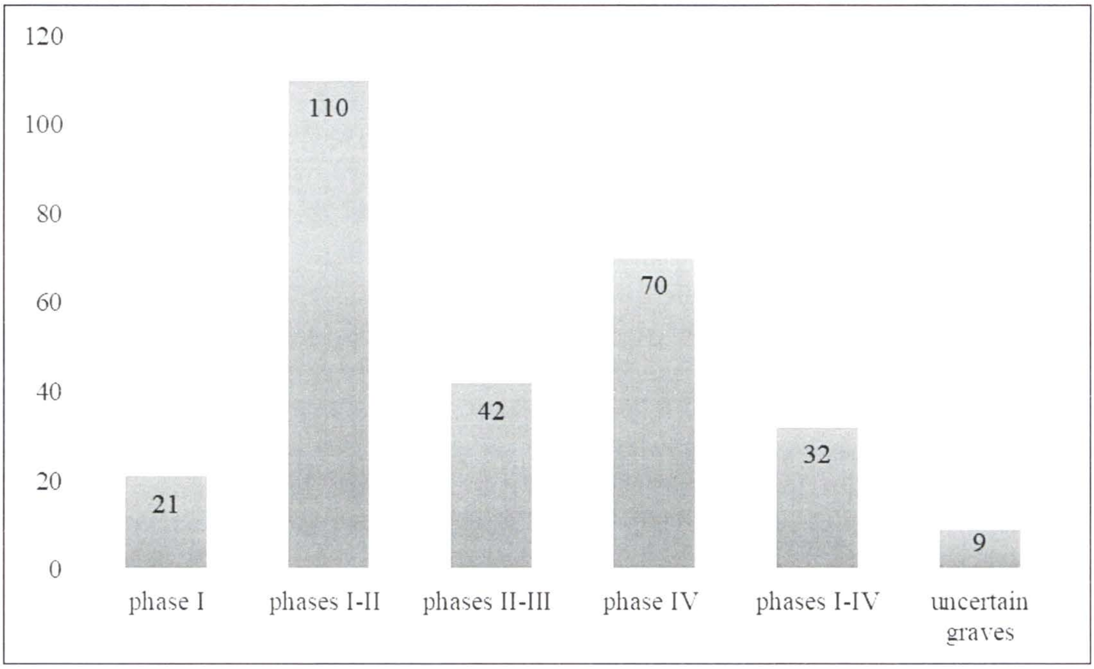

Fig. 8. Graph regarding the chronology of Turanic graves with inventory

Regarding the chronology of the graves without an inventory, according to the pattern employed, they can be attributed in general to phases I-IV, though some of them could also belong to other eras. Some authors usually, but not always believe that these graves are dated similarly to the various graves with a funerary inventory if they are found in the same tumulus or group of tumuli. There have been nevertheless cases in which the burials from the same tumulus (or group of tumuli) display great chronological differences. According to the dating of the graves with funerary inventory, those without could be hypothetically distributed thus (with due caution, expressed above): phase I – 22 graves; phases I-II – 52 graves; phases II-III – 17 graves; phase IV – 58 graves; phases I-IV – 139 graves.

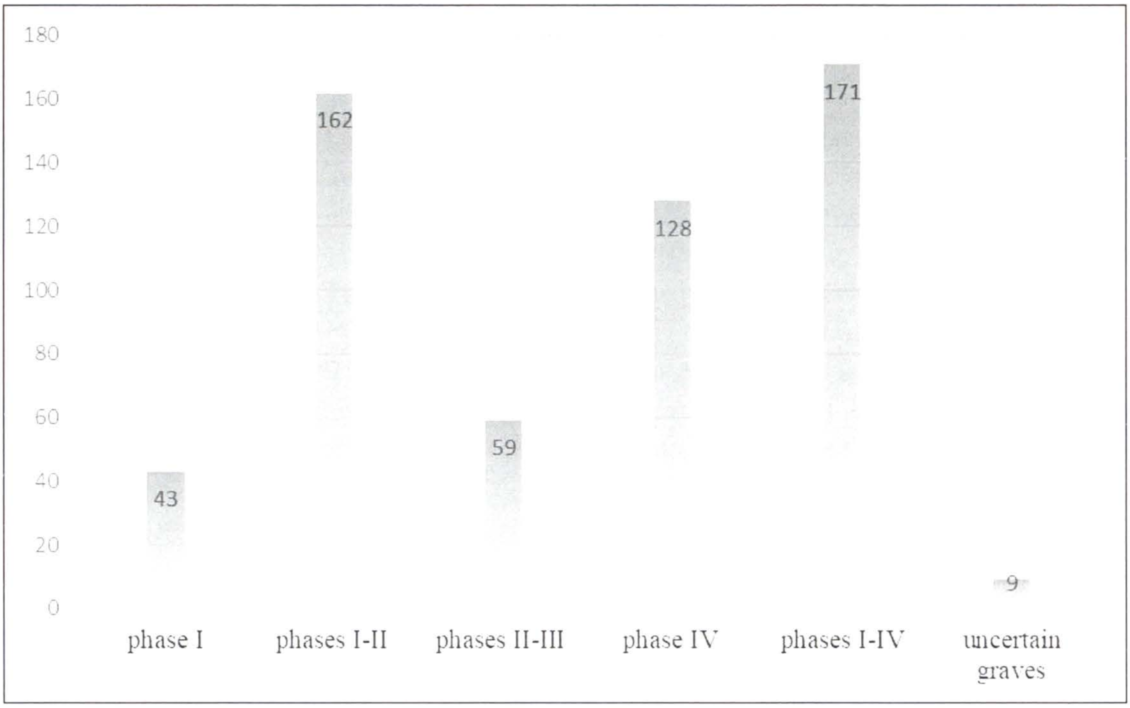

Fig. 9. Graph regarding the chronology of the Turanic graves between the Carpathians, the Lower Danube, and the Dniester

Thus, combining the two situations, one reaches the following distribution of the Turanic funerary features between the Carpathians the Lower Danube, and the Dniester among the chronological phases: phase I – 43 graves; phases I-II – 160 graves; phases II-III – 59 graves; phase IV – 128 graves; phases I-IV – 171 graves, adding, naturally, the nine graves with uncertain dating (Fig. 9.).

Still, this picture, that might be closer or faRther from the truth, remains a working exercise. The refining of the typo-chronology and future analyses (radiocarbon) that could lead to a narrower dating of the graves are two of the long-term research objectives. One could thus eventually end up with the possibility of making, with all due caution and reservation, ethnical attributions corresponding to the power structures that succeeded in the North Pontic steppes during the 10th–13th centuries.

CATALOGUE OF TURANIC GRAVES

1. **Adâncata** (Ialomiţa County; Romania); *Movila Mare*; 1985; systematic researches; 7 graves in tumulus.
Lit: Simion *et al.* 2004, 95–114; Simion *et al.* 2006, 90, 92–94, 98, 102–103, fig. 2; 6–7.

2. **Alexandrovca** (Floreşti Raion; Republic of Moldova); 1990; rescue researches; 8 graves in 3 tumuli.
Lit: Haheu, Gukin 1997, 200–207; fig. 8/6; 9/2; 10/1–9; 12/2–3, 5; 13/3–5.

3. **Balabanu** (= Balabani, r. Taraclia; Rep. Moldova); 1971; rescue researches; 9 graves in 6 tumuli.
Lit: Čebotarenko *et al.* 1989, 14–15, 37–38, 41–44, 66–71, fig. 2/3; 15/2; 17/3–4; 18/2–4; 28/1; 30/1–6, 8.

4. **Banca** (Vaslui County; Romania); *Şapte case*; 1981; fortuitous finds; 2 plane graves.
Lit: Maxim-Alaiba 1987, 235–237, fig. 1.

5. **Baštanovka** (Bashtanivka; Tatarbunar Raion; Ukraine); 1966; rescue researches; 1 grave in tumulus.
Lit: Šmaglii, Černjakov 1970, 81; Zineviči 1970, 161–162; Spinei 1985, 110, 211, fig. 39/18.

6. **Bârlad** (Vaslui County; Romania); *Parc*; 1960; fortuitous find; 1 grave in mound.
Lit: Spinei 1974, 395, 397; fig. 3; Spinei 1985, 111, 199; fig. 27/1–6.
Moara lui Chicoş; 1969; fortuitous find; 1 grave.
Lit: Spinei 1974, 396; fig. 2/7; Spinei 1985, 111, 202; fig. 30/8.
Dealul Ţuguieta; 2003; fortuitous find; 2 graves in tumulus.
Lit: Ursachi *et al.* 2005, 255–257.

7. **Bădragii (Vechi şi Noi)** (Edineţ Raion; Republic of Moldova); 1987–1990; rescue researches; 16 graves in 13 tumuli.
Lit: Jarovoj, Čirkov 1987, 3, 9, 20–22, 29–32, 34–35, 62–63, 66–68; fig. 3/7; 6/4; 11; 16/2; 17/3, 5–6; 19/3; 32/6–7; 34; Čirkov 1990, 161–165, fig. 4–5.
Lit: Čirkov 1989, 13–14, fig. 8/2.
Lit: Jarovoj *et al.* 1990, 35–36; fig. 21/2, 5–6.

8. Bălăbănești (Criuleni Raion; Republic of Moldova); 1981; rescue researches; 4 graves in 2 tumuli.
Lit: Agulnikov, Bejlekči 1987, 66, 72, 78–79; fig. 2; 6/1.

9. Băneasa (Galați County; Romania) (?); before 1970; fortuitous find; 1 grave.
Lit: Zaharia *et al.* 1970, 311; Spinei 1985, 110.

10. Belolesje (Bilolissya; Tatarbunar Raion; Ukraine); 1980; rescue researches; 15 graves in 8 tumuli.
Lit: Dobroljubskij 1986, 100, fig. 9/5–6, 8; Subbotin *et al.* 1998, 55–59, 61, 63, 67–68, 87–91, 99–101, 108; fig. 19/2; 20/5; 21/3, 7–9; 24/1–9; 32/1–3, 10; 33/3–4; 37/2, 5–7; 41/6; 42/5.

11. Berești (Galați County; Romania); 1954; fortuitous find; 1 grave in mound.
Lit: Zaharia *et al.* 1970, 388; Spinei 1974, 394–395; Spinei 1985, 110.
Chirvase; 1960; fortuitous find; 1 grave.
Lit: Spinei 1974, 394–396, fig. 2/3–4; Spinei 1985, 110–111, 199, 220, fig. 27/9–10; 48/1–2.

12. Bolgrad (Bolhrad; Bolgrad Raion; Ukraine) (?); 1966–1967; systematic researches? 3 tumular graves.
Lit: Subbotin, Šmaglij 1970, 116–129, not mentioning which three graves of all 42 researched in 10 tumuli date to the period under investigation; Gudkova *et al.* 1991, 51–52, 159.

13. Borisovka (Borysivka = Borisăuca, Tatarbunar Raion; Ukraine); 1965; rescue researches; 1 grave in tumulus
Lit: Šmaglii, Černjakov 1970, 67; Šmaglii, Černjakov 1970a, 115; Dobroljubskij, Dzigovskij 1981, 138; Spinei 1985, 111; Dobroljubskij 1986, 95, nr. 88.

14. Braniște (Rîșcani Raion; Republic of Moldova) (?); 1984; rescue researches; 1 grave in tumulus.
Lit: Levițki 1985, 46, fig. 42; Postică 2007, 449.

15. Brăviceni (Orhei Raion; Republic of Moldova); 1988; rescue researches; 38 graves in 11 tumuli.
Lit: Larina *et al.* 2008, 8–9, 13, 16–18, 21, 28–29, 31–32, 35, 37–40, 43, 46, 48, 50–54, 57, 59, 65, 67, 69, 89–91, 93, 101–102, 105, 108, 121–122; fig. 3; fig. 6/1–7, 9–10; fig. 7; fig. 12; fig. 13/3–7, 9; fig. 16; fig. 17/3–9, 12–13; fig. 18; fig. 21/8–10; 23/1; fig. 24/3–8; fig. 25/3–4; fig. 26/1; fig. 28/4, 6; fig. 32/2–3; fig. 34/1–7; fig. 47/1; fig. 49/3–9; fig. 57/5–12; fig. 65.

16. București (Romania); *Lacul Tei*; ante 1957; fortuitous find; 1 flat grave;
Lit: Morintz, Rosetti 1959, 34, 177; pl. 33/3–5; Sâmpetru 1973, 455–456; Ioniță 2005, 119, 194, fig. 22/1–3.

17. Burlănești (Edineț Raion; Republic of Moldova); 1987; rescue researches; 3 graves in 3 tumuli.
Lit: Demčenko, Levițki 2006, 311–312, 318–319, 321, 324, fig. 12/1–3; 15/2; 17/1–2.

18. Caplani (Ștefan Vodă Raion; Republic of Moldova); 1980; rescue researches; 1 grave in tumulus.
Lit: Agulnikov 1984, 93, 95; fig. 2/3.

19. Cazaclia (Gagauzia Autonomous Territorial Unit; Republic of Moldova); 1984–1985; rescue researches; 22 graves in 15 tumuli.
Lit: Postică *et al.* 1995, 159–168; fig. 7–11.

20. Căuşeni (Căuşeni Raion; Republic of Moldova); 1982; rescue researches; 9 graves in 5 tumuli.
Lit: Čebotarenko *et al.* 1989, 72, 76, 79, 84, 86, 89–90, 94–98, 100–101, fig. 33/1–2; 36/5; 38/2, 4; 40/3; 41/2; 42/2, 4.

21. Červonoarmejskoe (Kubei; Bolgrad Raion, Ukraine); 1986–1987; rescue researches; 3 graves in tumulus.
Lit: Subbotin 2001, 160–163; fig. 2/1–16, 19.

22. Chilia (Kiliya; Chilia Raion; Ukraine); 1994; rescue researches; 1 flat grave.
Lit: Subbotin, Subbotin 1994, 231–235.

23. Chircăieşti (Căuşeni Raion; Republic of Moldova); 1983; rescue researches; 13 graves in 4 tumuli.
Lit: Čebotarenko *et al.* 1989, 134–141, 147–153, fig. 59/2–4, 8; 60/1–2; 61/2–5; 65/1–3; 66/2; 67/1.

24. Chirileni (Ungheni Raion; Republic of Moldova); 1990; systematic researches; 3 raves in tumulus.
Lit: Abyzova, Kločko 2000, 518–522; fig. 4/2–4; 5/4; 6/1–3.

25. Cimişeni (Criuleni Raion; Republic of Moldova); 1981; rescue researches; 3 graves in 2 tumuli.
Lit: Agulnikov, Bejlekči 1987, 78, 80, 82–83; fig. 6/5–6; 7/6.

26. Cioburciu (Ştefan Vodă Raion; Republic of Moldova); 1989; rescue researches; 6 graves in tumulus.
Lit: Agulnikov, Antipenko 1990, 6–7, 12, 15–18, 21; fig. 8/2–3, 5; 11/1, 5–6; 12/3.

27. Ciocîlteni (Orhei Raion; Republic of Moldova); 1985; rescue researches; 15 graves in 4 tumuli.
Lit: Chetraru, Haheu 1990, 51–62, 65, 69–70, fig. 2/2; 3–5; 6/1–14; 11/1, 6.

28. Cireşanu (municipality of Baba Ana, Prahova County; Romania); *fostul CAP*; 1974; fortuitous find followed by a rescue excavation; 1 grave, probably flat.
Lit: Ioniţă 2005, 53, 123, 196, fig. 24/3.

29. Ciulniţa (Ialomiţa County; Romania); 1996; rescue researches; 2 graves in tumulus.
Lit: Marinescu-Bîlcu *et al.* 2000, 153–154, 158, fig. 3; 162, fig. 9/3–6; Bălteanu 2000, 167–168.

30. Cîrnăţeni (Căuşeni Raion; Republic of Moldova); 1985; rescue researches; 4 graves in 3 tumuli.
Lit: Demčenko, Čebotarenko 1988, 95–99, fig. 2/1–6; 3/1–3; 4/1–4.

31. Coada Izvorului (municipality of Măneşti; Prahova County; Romania); *Movila de la Islaz*; 2017; rescue researches; 1 grave in tumulus.
Lit: Frînculeasa *et al.* 2018, 81, 84, fig. 2/c; 95, pl. 8/1–6.

32. Codrul Nou (Teleneşti Raion; Republic of Moldova); 1984; rescue researches; 2 graves in 2 tumuli.
Lit: Jarovoj 1985, 14–15, 26; fig. 9/4–6; 14/1–3; Postică 2007, 452.

33. Copanca (Căuşeni Raion; Republic of Moldova); ante 1938; systematic researches? 1 grave in tumulus.
Lit: Spinei 1985, 111.

34. Copceac (Gagauzia Autonomous Territorial Unit; Republic of Moldova) (?); 1985; rescue researches; 2 graves in tumulus.
Lit: Bejlekči 1990, 35–38; fig. 3/5–6.

35. Corjeuţi (Briceni Raion; Republic of Moldova); *Husa*; 1989; rescue researches; 2 graves in 2 tumuli.
Lit: Leviţki, Demčenko 1994, 220–221, 224, 227; fig. 4/4–10; 6/4–5.

36. Corjova (= Corjevo, Criuleni Raion; Republic of Moldova); 1979–1980; rescue researches; 2 graves in 2 tumuli.
Lit: Borziak *et al.* 1983, 6–8, 16, fig. 3/2; 4/3; Spinei 1985, 111–112, 197, 211, fig. 25/2; 39/23.

37. Corpaci (Edineţ Raion; Republic of Moldova); 1976; rescue researches; 2 graves in 2 tumuli.
Lit: Dergacev 1982, 34–36, 38; fig. 9/2–4, 10--16; Spinei 1985, 112, 207, fig. 35/3–4, 6, 8, 11–14.

38. Costeşti (Rîşcani Raion; Republic of Moldova); 1975; rescue researches; 5 graves in 3 tumuli.
Lit: Dergacev 1982, 5–10, 12–13, 17; fig. 1/3–6; 2/2–8; 3/13–14; Spinei 1985, 112, 207, fig. 35/1–2, 5, 7, 15, 19–20.

39. Cotiujeni (Şoldăneşti Raion; Republic of Moldova); 1986; systematic researches? 3 graves in 3 tumuli.
Lit: Agulnikov 1992, 108, 114–115, 117–118; fig. 7/5; 8/2.

40. Cuconeştii Vechi (Edineţ Raion; Republic of Moldova); 1975–1976; rescue researches; 1 grave in tumulus.
Necropola II; 1975; rescue researches; 1 flat grave (in a Sarmatian-Era necropolis).
Lit: Dergacev 1982, 29, 121–122, fig. 43/1–4; Spinei 1985, 112, 207, fig. 35/16–18.

41. Curcani (Călăraşi County; Romania); *Potcoava*; 1968–1969; systematic researches; 1 grave in tumulus.
Lit: Sâmpetru, Şerbănescu 1971, 443–445, 447, 453; fig. 1; 4–5; 6/1–4.

42. Divizija II (Dyviziya; Tatarbunar Raion; Ukraine); 1986; systematic researches? 5 graves in 3 tumuli.
Lit: Subbotin *et al.* 2002, 564–565, 567–569, 573–574, fig. 1/5–7; 3/3, 9–10; 6/5–6.

43. Doina (Cahul Raion; Republic of Moldova); 1991; rescue researches; 1 grave in tumulus.
Lit: Bubulič 1992, 25–26, fig. 20; 22/1–3; Postică 2007, 453.

44. Dridu (Ialomiţa County; Romania); *Snagov* (?); 1982; rescue researches? 1 grave.
Lit: Spinei 1985, 121–122.

45. Dubăsarii Vechi (Criuleni Raion; Republic of Moldova); 1984; rescue researches? 1 grave in tumulus.
Lit: Borziak, Leviţki 1989, 113–116, fig. 4/13–14; 6/1.

46. Dzinilor (Zenelor; Ismail Raion; Ukraine); 1979; rescue researches; 3 graves in 3 tumuli.
Lit: Gudkova *et al.* 1980, 30, 34, 38; fig. 27/9–11; 31/3–6; Dobroljubskij 1986, 97–98, nr. 105, 112, 116.

47. Etulia (Gagauzia Autonomous Territorial Unit; Republic of Moldova); 1975; rescue researches? 4 graves in tumulus.
Lit: Bejlekči, Serova 1976, 26–28, 50, 53–54; fig. 13, 19, 21; Serova 1976, 476; Spinei 1985, 112.

48. Făleşti (Făleşti Raion; Republic of Moldova) (?); 1953; fortuitous find? 1 grave in tumulus.
Lit: Fedorov 1960, 179.

49. Feşteliţa (Ştefan Vodă Raion; Republic of Moldova); 1989; rescue researches; 2 graves in tumulus.
Lit: Agulnikov, Antipenko 1990, 57–58; fig. 34/5–6; Postică 2007, 453.
1991; rescue researches; 4 graves in 2 tumuli.
Lit: Vysockij 1992, 14, 16, 21–22, 66, 68–69; fig. 21/2–3; 23g; 24b.

50. Frumuşica (Floreşti Raion; Republic of Moldova); 1975; fortuitous find; 1 flat grave;
Lit: Grosu 1981, 159–164; Spinei 1985, 113, 207; fig. 35/21–37.

51. Galaţi (Galaţi County; Romania); *Seromgal S. A.*; 1977; rescue researches; 1 double grave in tumulus.
Lit: Brudiu 1979, 324, 326–327; fig. 1; 4.A; Brudiu 2003, 78–79, 196–197; fig. 41–42/A; Nicolăescu-Plopşor 1979, 336–337.

52. Găvănoasa (Cahul Raion; Republic of Moldova); 1991; rescue researches; 9 graves in 8 tumuli.
Lit: Agulnikov 1992, 6, 8, 11, 13, 18, 23, 26, 28–29; fig. 4/3; 6/2; 8/3; 11/2; 13/4; 15/2; 20/1, 5; 22/8; Postică 2007, 453.

53. Giurgiuleşti (Cahul Raion; Republic of Moldova) (?); 1991; rescue researches; 1 grave in tumulus.
Lit: Haheu, Popovici 2010, 132, 135; fig. 3/3.

54. Gorodnee (= Ogorodnoe; Horodnje = Čijšija; Bolgrad Raion; Ukraine); rescue researches; 6 graves in 4 tumuli.
Ogorodnoe II, 1966, 4 graves in 3 tumuli.
Ogorodnoe III, 1980; *Kajnak*; rescue researches; 2 graves in tumulus.
Lit: Subbotin *et al.* 1970, 150; fig. 7/3; 17/17–18; Spinei 1985, 114, 211; fig. 39/14–15; Subbotin *et al.* 1984, 105–106; fig. 1/5–7; Stanko 2003, 42–43, 65–66, 114–115; fig. 6, 14–15, 24/1–5. Postică 2007, 453.

55. Grădiştea (Cimişlia Raion; Republic of Moldova); 1946; rescue researches? 1 double grave in tumulus.
Lit: Oboldueva 1955, 37, 45, 47–48; fig. 9–10; Spinei 1985, 113, 222; fig. 50/4–18.

56. Griviţa (Galaţi County; Romania); 1986; rescue researches; 3(4?) graves in 2 tumuli.
Lit: Brudiu 1987, 11–12, 14; fig. 3; 4/1, 4; 8/1–2; Brudiu 2003, 64–65, 181, 183; fig. 26/1; fig. 28/1–2.

57. Griviţa (Vaslui County; Romania); ante 1985; systematic researches? 1 grave in mound.
Lit: Spinei 1985, 113, 202, 221; fig. 30/5–6, 9; 49/4.

58. Grozeşti (Iaşi County; Romania); ante 1970; fortuitous find; 1 flat grave located on a prominent hill W of the settlement.
Lit: Spinei 1976, 147, fig. 18; Spinei 1985, 113, 122, 201, 220; fig. 29; 48/6, 9–15.

59. Gura Bîcului (Anenii Noi Raion; Republic of Moldova); 1974; rescue researches; 1 grave in tumulus.
Lit: Dergacev 1984, 4, 6, 35; fig. 2/2–5, 7, 9; Spinei 1985, 113, 205, 211; fig. 33/5–7; 39/6.

60. Hagimus (Căuşeni Raion; Republic of Moldova); 1983; rescue researches; 7 graves in 3 tumuli.
Lit: Čebotarenko *et al.* 1989, 155–157, 159–160, 165–166, 172–173; fig. 68/3–4; 70/4–6; 72/7; 75/11.

61. Hajilar (Ştefan Vodă Raion; Republic of Moldova); 1992; rescue researches; 10 graves in 3 tumuli.
Lit: Agulnikov *et al.* 2001, 100–110, 113–114; fig. 4/5–6, 8–9; 6/1–2, 7–8; 7/5; 8/2; 9/3–4.

62. Hancăuţi (Edineţ Raion; Republic of Moldova); 1975–1976; rescue researches; 2 graves in tumulus.
Lit: Dergacev 1982, 44–46; fig. 11/2, 17–19; Spinei 1985, 113, 207; fig. 35/9–10.

63. Hîrtopul Mare (Criuleni Raion; Republic of Moldova); *La Şanţ*; 2008; rescue researches; 1 flat grave.
Lit: Vlasenko, Bikbaev 2009, 313–321.

64. Holboca (suburban municipality of the city of Iaşi, Iaşi County; Romania); 1951; systematic researches; 2 graves in tumulus.
Lit: Nestor *et al.* 1952, 96, 108–110; fig. 14–15; Spinei 1974, 396–398; fig. 4; Spinei 1985, 114, 206; fig. 34/1–11.

65. Holmskoe (Kholms'ke; Arciz Raion; Ukraine); 1978; rescue researches; 1 grave in tumulus.
Lit: Gudkova *et al.* 1979, 131–132; fig. 146; 157; Dobroljubskij 1982, 36; Spinei 1985, 114, 197, 210; fig. 25/8; 38/12, 30–35, 39, 41.

66. Iablona (Glodeni Raion; Republic of Moldova); 1979; rescue researches; 3 graves in tumulus.
Lit: Dobroljubskij 1986, 102, nr. 148–150.

67. Ivanovca (Floreşti Raion; Republic of Moldova); 1990; rescue researches; 3 graves in 2 tumuli.
Lit: Haheu, Gukin 1997, 190–193; fig. 3/1–2, 4–8; 4/1–12.

68. Însurăţei (Brăila County; Romania) (?); *Popina Ruptă*; 1997; rescue researches; 1 grave in mound.

Lit: Pandrea *et al.* 1998, 36; Ioniţă 2005, 134, 196; fig. 24/1–2.

69. Jilava (Ilfov County; Romania); *Măgura Jilavei*; 1929; systematic researches; 1 grave (cenotaph?) in *tell*-settlement.
Lit: Rosetti 1929, 33; Rosetti 1934, 208–209; Morintz, Rosetti 1959, 34; pl. 33/1–2.

70. Kalančiak (Kalanchak; Ismail Raion; Ukraine); 1982; rescue researches; 2 graves in 2 tumuli.
Lit: Gudkova *et al.* 1982, 46–47, 50; tab. 53/4–8; 58/6–7; Dobroljubskij 1986, 100, nr. 136.

71. Kalčeva (Kalcheva; Bolgrad Raion; Ukraine); 1986; rescue researches; 4 graves in 2 tumuli.
Lit: Subbotin 1997, 99–101; fig. 1/2; 2/2–4, 6.

72. Kamenka (Kam'yanka; Ismail Raion; Ukraine); ante 1970–1971; rescue researches? 3 graves in 3 tumuli.
Lit: Dobroljubskij, Dzigovskij 1981, 139–140; Dobroljubskij 1986, 96, 98–99, nr. 100–101, 125.

73. Kislicja (Kyslytsya = Chişliţa, Ismail Raion; Ukraine); 1976; rescue researches; 1 grave in tumulus.
Lit: Gudkova *et al.* 1995, 99–100; fig. 4/9.

74. Kočkuvatoe (Kochkuvate; Tatarbunar Raion; Ukraine); 1978; rescue researches? 1 grave in tumulus.
Lit: Dobroljubskij 1982, 39; Spinei 1985, 111, 210; fig. 38/36–38, 40, 42.

75. Lieşti (Galaţi County; Romania); *Movila Arbănaşu*; 1985–1986; rescue researches; 2 graves in 2 tumuli.
Lit: Brudiu 2003, 41, 67, 164, 169, 184; fig. 9/3; 14/4–6; 29/3.

76. Liman (Lyman; Tatarbunar Raion; Ukraine); 1984; rescue researches; 4 graves in tumulus.
Lit: Subbotin, Toščev 2002, 14–19, 27, 45–46, 48–49, 52, 60; fig. 3/12–14; 4/3–4; 5/2.

77. Limanskoe (Lymans'ke = Fricăţei, Reni Raion; Ukraine); 1979, 1981; rescue researches; 4 graves in 4 tumuli.
Lit: Gudkova *et al.* 1981, 36, 46, 54; fig. 32/7–8; 40/6; 44/2–8; Dobroljubskij 1986, 98, 101, nr. 118, 143–145.

78. Lişcoteanca (municipality of Bordei Verde, Brăila County; Romania); 1970, 1972; systematic researches; *Movila olarului*; 2 graves in tumulus; *Moş Filon*; 1 grave in tumulus.
Lit: Harţuche, Anastasiu 1980, 266–274; fig. 3; 4/1, 3–4; 5/1–9, 11.

79. Lunca (municipality of C. A. Rosetti, Buzău County; Romania); 2018; fortuitous find, followed by a rescue excavation; 1 grave in tumulus.
Lit: Information provided by A. Frânculeasa and Roxana Munteanu.

80. Manta (Cahul Raion; Republic of Moldova); 1990–1991; rescue researches; 2 graves in tumulus.
Lit: Agulnikov, Ursu 2008, 68, 76; fig. 9/2–3.

81. Matca (Galaţi County; Romania); 1980; rescue researches; 1 grave in tumulus.

Lit: M. Brudiu 2003, 74–75, 190, 192–193; fig. 35; 37–38/1–7.

82. Mărculeşti (Floreşti Raion; Republic of Moldova); 1986; rescue researches; 1 grave in tumulus.
Lit: Levinski, Tentiuc 1990, 94–96; fig. 1/4, 6.

83. Medveja (Briceni Raion; Republic of Moldova); 1981; rescue researches; 1 grave in tumulus.
Lit: Sava, Dergacev 1984, 102, 107; fig. 3/10.

84. Mereni (Anenii Noi Raion; Republic of Moldova); 1986–1987; rescue researches? 2 graves in 2 tumuli.
Lit: Dergacev, Sava 2002, 527–529, 550, 552; fig. 3/2–7; 17/2.

85. Milostea (municipality of Slătioara, Vâlcea County; Romania) (?); *Câmpul Polovragilor*, systematic researches; 1964; 1 grave (cenotaph?) in tumulus.
Lit: Popescu, Vulpe 1966, 149, fig. 1/8–12; p. 152, 154, fig. 8.

86. Mirnopole (Mirnopillya = Friedensfeld, Sarata Raion; Ukraine); ante 1899; systematic researches? 1 grave in tumulus.
Lit: Spinei 1985, 112, 200; fig. 28; Ursu 2010, 169–170, 172; fig. 2.

87. Mîndreşti (Teleneşti Raion; Republic of Moldova); ante 1985; fortuitous find; 1 grave in tumulus.
Lit: Spinei 1985, 114, 202; fig. 30/1–2.

88. Moscu (city of Târgu Bujor, Galaţi County; Romania); *Dealul lui Fulger*; 1938; fortuitous find; 1 grave.
Lit: Spinei 1974, 397–399; fig. 5–6; 10/11; Spinei 1985, 114, 203, 221; fig. 31/14; 49/3; Ursu 2010, 170, 173; fig. 3.

89. Moviliţa (Ialomiţa County; Romania); 1965; fortuitous find; seems to be a flat grave.
Lit: Diaconu, Diaconu 1967, 135–140; Diaconu 1978, 16–17; fig. 2.

90. Nagornoe (Nahirne; Reni Raion; Ukraine); 1982; rescue researches; 1 grave in tumulus.
Lit. Toščev 1992, 17.

91. Novokamenka (Novokam'yanka; Ismail Raion; Ukraine); 1971; rescue researches; 1 grave in tumulus.
Lit: Dobroljubskij, Dzigovskij 1981, 140, nr. 12; Dobroljubskij 1982, 39, nr. 7; Spinei 1985, 114; Dobroljubskij 1986, 97, nr. 107; Ursu 2010, 170.

92. Novoselica (Novoselivka; Tatarbunar Raion; Ukraine); 1977–1978; rescue researches; 12 graves in 4 tumuli.
Lit: Subbotin *et al.* 1995a, 70–71, 75–79, 83, 85, 89–90, 92, 96, 99–100, 104–105; fig. 23/2–9; 25/1–6, 11–12; 26/2–4; 27/6; 28/5; 30/7–8; 33/3, 5–6; 35/4.

93. Novoselskoe (Novosil's'ke = Satu Nou, Reni Raion; Ukraine); 1980; rescue researches; 6 graves in 3 tumuli.
Lit: Gudkova *et al.* 1980, 18–19; fig. 14/2; 15/1; Andruh *et al.* 1985, 42–43, 45, 47, 56, 92–93, 102, 114–115, 119, 122–123; fig. 1; 13/7–8; 14/4, 6; 18/7–11, 13–14; 21/2; 22/8–12.

Ciauš; 1981; rescue researches; 1 grave (main?) in tumulus.
Lit: Gudkova *et al.* 1981, 73; tab. 60/3, 12–13, 15–21; Dobroljubskij 1986, 101, nr. 146; fig. 8/10–19.
Gradeška lac; 1983; rescue researches; 5 graves in 4 tumuli (tumuli group *Gradeška I*).
Lit: Dobroljubskij *et al.* 1988, 84–93; Subbotin *et al.* 1995, 111–115, 118, 120; fig. 2/8–15; 5/1.

94. Obileni (Hînceşti Raion; Republic of Moldova); 1988; rescue researches; 1 grave in tumulus.
Lit: Leviţki *et al.* 1996, 55, 149; fig. 23/4.

95. Olăneşti (Ştefan Vodă Raion; Republic of Moldova); 1960, rescue researches; 2 graves in tumulus.
Lit: Meljukova 1962a, 30; Spinei 1985, 114, 197; fig. 25/6.
1978–1980; rescue researches; 5 graves in 4 tumuli.
Lit: Jarovoj 1990, 163, 176, 192–193, 199–200, 209; fig. 70/3–4; 78/3; 87/1; 90/4; 96/3.

96. Olteniţa (Călăraşi County; Romania); *La Iordoc*; 1961; systematic researches; 1 grave.
Lit: Morintz, Ionescu 1968, 101.
Renie (circa 150 m from the spot called *La Iordoc*); 1968; fortuitous find; 1 grave
Lit: Sâmpetru 1973, 454, 458; Sâmpetru 1974, 257, 263.

97. Opaci (Căuşeni Raion; Republic of Moldova); 1985; rescue researches; 4 graves in 3 tumuli.
Lit: Demčenko, Čebotarenko 1988, 97–100; fig. 3/4–5, 7; 4/7.

98. Orlovka (Orlivka; Reni Raion; Ukraine) (?); 1981; rescue researches; 2 graves in tumulus.
Lit: Bondar, Subbotin 2000, 154, 157, 160; fig. 2/1, 4.

99. Palanca (Drochia Raion; Republic of Moldova); 1990; rescue researches; 8 graves in 4 tumuli.
Lit: Kurčatov 1991, 6, 19–20, 23, 44–45, 49, 59–60; fig. 4/3; 10/6; 11; 13/5–7; 22/7; 23; 25/2; 33/1–3; Gukin, Kurceatov 1998, 136–139; fig. 1; Postică 2007, 455.

100. Pavlovka (Pavlivka; Arciz Raion; Ukraine); 1891, 1893; systematic researches? 4 graves in 2 tumuli.
Lit: Spinei 1985, 114–115, 204; fig. 32; Dobroljubskij, Dzigovskij 1981, 139; Dobroljubskij 1986, 96, nr. 94–96.

101. Păuleşti (municipality of Păuleşti, Prahova County; Romania); *Lizieră Pădure*; 2011; rescue researches; 1 grave in tumulus.
Lit: Frînculeasa *et al.* 2012, 141–145, 151–154, 158; pl. 5–8; 12/1–2, 4–5, 7, 9.

102. Pererîta (Briceni Raion; Republic of Moldova); 1987; rescue researches; 3 graves in 2 tumuli.
Lit: Kurčatov 2006, 265, 267–269, 275–276; fig. 3/2–3; 4/5–6; 8/3–5.

103. Petreşti (Ungheni Raion; Republic of Moldova); 1986; rescue researches; 6 graves in 3 tumuli.
Lit: Jarovoj 1987, 12, 16–24; fig. 9; 12; 13/1–7; 14/3; 16/3, 8; 17/2; 20/1–2, 7; Čirkov 1990, 158–161; fig. 1–3; Postică 2007, 456.

104. Platoneşti (municipality of Săveni, Ialomiţa County; Romania); 1997; systematic researches; 1 flat grave in a bi-ritual necropolis.
Lit: Matei 1998, 57–58; Ioniţă 2005, 139.

105. Plavni (Reni Raion; Ukraine); 1979–1982; rescue researches; 4 graves in 3 tumuli.
Lit: Dobroljubskij 1981, 132–133; fig. 1; Gudkova 1981, 241; Spinei 1985, 115, 197, 210; fig. 25/3; 38/1–10, 13–14; Andruh *et al.* 1985, 18, 62, 70, 92–93, 102, 109, 123, 128; tab. 1; 8/2; 22/13; 27/2; Dobroljubskij 1986, 98, 100, nr. 119, 135; fig. 11/1–7, 10.
Gazoprovod; 1986; rescue researches; 1 grave in tumulus.
Lit: Šilov *et al.* 1986, 40–41; tab. 34.

106. Pogoneşti (municipality of Iveşti, Vaslui County; Romania); 1970; fortuitous find; 1 grave.
Lit: Spinei 1974, 400, 403; fig. 10/10; Spinei 1985, 115, 199, 202, 206, 221; fig. 27/7–8; 30/7; 34/12; 49/1–2, 5–6.

107. Poiana (municipality of Turburea, Gorj County; Romania) (?); ante 1935; yard owned by Gh. Tătărescu (former prime minister 1934–1937); fortuitous find; 1 grave in tumulus.
Lit: Berciu 1935, 25.

108. Pomazany (Ševcenkove / Shevchenkove, Chilia Raion; Ukraine); 1978; systematic researches? 4 graves in 2 tumuli.
Lit: Gudkova *et al.* 1979, 14–15; fig. 16; 24; Dobroljubskij, Dzigovskij 1981, 138–139; Dobroljubskij 1986, 95–96, nr. 93; Toščev, Redina 1991, 95, 101–102, 104; fig. 1/6; 4/2, 4, 6–7; 5/4.

109. Popeasca (= Popova; Ştefan Vodă Raion; Republic of Moldova); 1991; rescue researches; 2 graves in 2 tumuli.
Lit: Vysockij 1992, 10, 14, 51, 55; fig. 6/2; 10/2; Postică 2007, 457.

110. Primorskoe (Prymors'ke; Chilia Raion; Ukraine); 1976; rescue researches; 1 grave (cenotaph?) in tumulus.
Lit: Čebotarenko 1977, 31, fig. 64; Čebotarenko *et al.* 1977, 387; Spinei 1985, 115–116, 198; fig. 26/1; Dobroljubskij 1986, 98, nr. 115.

111. Primorskoe (Prymors'ke = Budachi, Belgorod-Dnestrovski Raion; Ukraine); 1890; 1 grave in tumulus.
Lit: Spinei 1985, 111.

112. Probota (Iaşi County; Romania); *Dealul Moşanca*; 1959; rescue researches; 1 flat grave (in a Bronze Age and Sarmatian-Era necropolis).
Lit: Zaharia, Zaharia 1962, 602–605; fig. 5–8; Spinei 1974, 396, 400–402; fig. 2/1–2, 5–6; Spinei 1985, 116, 197, 202–203, 220; fig. 25/4; 30/3–4; 31/1–2; 48/5, 7–8.

113. Purcari (Ştefan Vodă Raion; Republic of Moldova); 1978–1980; systematic researches; 4 graves in 3 tumuli.
Lit: Spinei 1985, 116; Jarovoj 1990, 52–53, 70, 96–98, 108–109; fig. 22/3; 31/1–2, 5; 42/4, 7–8; 47/1.

114. Răscăieţii Noi (Ştefan Vodă Raion; Republic of Moldova); 1979; rescue researches; 1 grave in tumulus.
Lit: Dobroljubskij 1986, 102, nr. 153.

115. Râmnicelu (Brăila County; Romania); *Popina*; 1968–1970; systematic researches; 1 grave in tumulus.
Lit: Harţuche, Anastasiu 1980, 263–266, 270–271; fig. 2; 5/10; 6/2.

116. Roma (Botoşani County; Romania); *Şitna*; 1985; rescue researches; 4 graves in tumulus.
Lit: Buzdugan, Alexoaie 1989, 106–107, 111–114; fig. 2; 3/1; 4/1–3; 5/1, 3–8; 6/1.

117. Roşcani (= Roşcana, Anenii Noi Raion; Republic of Moldova); 1983; rescue researches; 1 grave in tumulus.
Lit: Dergacev *et al.* 1989, 33, 36, 62; fig. 12/6.

118. Rumeanţev (Cahul Raion; Republic of Moldova); 1991; rescue researches; 6 graves in 2 tumuli.
Lit: Bubulič 1992, 3–4, 11, 15–18, 22–23; fig. 4; 6/2, 4; 14–16; 19/6; Postică 2007, 457.

119. Sadovoe (Sadove = Šabalat, Belgorod-Dnestrovski Raion; Ukraine); 1906; fortuitous find? 1 grave.
Lit: Spinei 1985, 117, 205; fig. 33/3–4, 8.

120. Saiţa (= Săiţi, Căuşeni Raion; Republic of Moldova); 1985; rescue researches; 3 graves in 2 tumuli.
Lit: Demčenko, Čebotarenko 1988, 98–100; fig. 3/6, 8; 4/6.

121. Sarata (Sarata Raion; Ukraine); 1888–1889; systematic researches; 10 graves in 6 tumuli.
Lit: Fedorov-Davydov 1966, 262; Dobroljubskij, Dzigovskij 1981, 139, 141; Dobroljubskij 1986, 96–97, 99, nr. 97–99, 110, 127; Spinei 1985, 116; Ursu 2010, 170.

122. Sărăteni (municipality of Cotul Morii; Hînceşti Raion; Republic of Moldova); 1988; rescue researches; 1 grave in tumulus.
Lit: Leviţki *et al.* 1996, 40, 46, 127; fig. 23/4.

123. Selişte (Orhei Raion; Republic of Moldova); 1972; systematic researches? 3 flat graves on a promontory.
Lit: Rafalovič, Lăpuşnian 1974, 142–147; fig. 13–15; Spinei 1985, 116–117, 198, 208; fig. 26/3, 5–6; 36.

124. Sergheevka (Serhiivka, Sarata Raion, Ukraine); 1989; rescue researches; 6 graves in 6 tumuli.
Lit: Dzigovskij, Subbotin 1989, 16, 28, 30, 32–33, 35–37, 42–43; tab. 16/4; 19/1–4; 20/1–3; 22/1–3; 23/3–4; 29/1–5.

125. Sevirova (Floreşti Raion; Republic of Moldova); 1990; rescue researches; 4 graves in 2 tumuli.
Lit: Haheu, Gukin 1997, 195–199; fig. 6/2–3; 7/6, 4, 11–12; 8/2.

126. Slobozia (Ştefan Vodă Raion; Republic of Moldova); 1991; rescue researches; 2 graves in tumulus.
Lit: Vysockij 1992, 26, 29, 56, 61; fig. 11/2–5; 16/2–5; Postică 2007, 458.

127. Speia (Anenii Noi Raion; Republic of Moldova); 1986; systematic researches? 2 graves in tumulus.

Lit: Dergacev *et al.* 1992, 88–90, 93, 95; fig. 3/1, 3, 7; 5/2.

128. **Strejnicu** (municipality of Târgşoru Vechi, Prahova County; Romania); *Balastieră Don*; 2011; rescue researches; 1 grave (cenotaph?) in tumulus.
Lit: Frînculeasa *et al.* 2012, 141–145, 155–158; pl. 9; 10/1, 3; 11; 12/3, 6, 8.

129. **Strumok** (Tatarbunar Raion; Ukraine); 1980; rescue researches; 2 graves in tumulus.
Lit: Gudkova *et al.* 1980, tab. 44/1; 47/3 a, b; Gudkova 1981, 242; Spinei 1985, 117.

130. **Sudiţi** (municipality of Gherăseni; Buzău County; Romania); *Crucea lui Ştefan*; 1970; systematic researches; 2 graves in mound?
Lit: Frînculeasa 2011, 254, 258–259; fig. 3/5.

131. **Suvorovo** (Suvorove; Ismail Raion; Ukraine); 1970; rescue researches? 1 grave in tumulus.
Lit: Dobroljubskij, Stoliarik 1983, 71–73; Spinei 1985, 117, 209; fig. 37/1–2, 5–8.

132. **Svetlîi** (Gagauzia Autonomous Territorial Unit; Republic of Moldova) (?); *Alexeevca*; 1981; rescue researches. Unclear situation of the graves dated to the 10th–13th centuries; 14 graves lacking an inventory were discovered in the 3 researched tumuli and were not attributed to a period. It is possible that some of them belong to Turanics.
Lit: Manzura 1984, 119–120, 126–133, 133–134; Dobroljubskij 1986, 103, nr. 158; fig. 10/10; Postică 2007, 458–459; Spinei 2009, 284.

133. **Šyroke** (Shyroke; Belgorod-Dnestrovsky Raion, Ukraine); *Alkalija*; 1987; rescue researches; 6 graves in 2 tumuli.
Lit: Subbotin *et al.* 1987, 82–84, 86–87, 90; tab. 54/5–6, 11–12; 55/8; 56/1–3; 57/1–2, 15–18.

134. **Ştefan Vodă** (Ştefan Vodă Raion; Republic of Moldova); 1991; rescue researches; 3 graves in tumulus.
Lit: Vysockij 1992, 34–35, 37–38, 73–75, 77; fig. 28–30; 32/3.

135. **Ştiubei** (municipality of Râmnicelu, Buzău County; Romania); *Movila Săpată*; 1987; fortuitous find; 1 grave in tumulus.
Lit: Constantinescu 1994, 168–169.

136. **Talmaza** (Ştefan Vodă Raion; Republic of Moldova); 1989; rescue researches; 7 graves in 3 tumuli.
Lit: Agulnikov, Antipenko 1990, 28, 30, 50–52, 55; fig. 15/6; 16/5; 23; 24/5–7; 27/2, 4; Postică 2007, 459.

137. **Tangâru** (municipality of Stoeneşti, Giurgiu County; Romania); 1956; systematic researches; 1 grave in *tell*-settlement.
Lit: Berciu 1959, 152; fig. 10/1–2; Maximilian, Haas 1959, 155–160.

138. **Taraclia** (Taraclia Raion; Republic of Moldova); 1979–1984; systematic researches; 30 graves in 13 tumuli.
Lit: Agulnikov 1981, 386–387; Agulnikov, Haheu 1988, 74–79; Postică *et al.* 1995, 141–159; fig. 1–6.

139. Târgşoru Nou (municipality of Ariceşti Rahtivani, Prahova County; Romania); 2019; rescue researches; 1 grave in tumulus.
Lit: Information provided by A. Frânculeasa.

140. Teţcani (Briceni Raion; Republic of Moldova); 1988; rescue researches; 2 graves in 2 tumuli.
Lit: Glazov, Kurčatov 2005, 309–314; fig. 7/1–11; 9/2.

141. Tochile-Răducani (Leova Raion; Republic of Moldova); 1985; rescue researches; 2 graves in tumulus.
Lit: Jarovoj, Kurčatov 1986, 13–14, 18–19; fig. 7/4–5; Postică 2007, 460.

142. Todireni (Botoşani County; Romania); *Şcoala*; 1955; fortuitous find; 1 flat grave; *CAP*; 1966; fortuitous find; 1 flat grave;
Lit: Spinei 1973, 278–281; fig. 1/1, 3–4; 2/1, 3–4; Spinei 1974, 400, 402; fig. 9/1, 3–4; Spinei 1985, 117, 199, 220; fig. 27/11–13; 48/3–4; Ursu 2010, 170.

143. Tomai (Gagauzia Autonomous Territorial Unit; Republic of Moldova) (?); 1983; rescue researches; 1 grave in tumulus.
Lit: Leviţki 1988, 38–39; fig. 4/10.

144. Trapovka (Trapivka; Tatarbunar Raion; Ukraine); 1977–1978; rescue researches; 8 graves in 5 tumuli.
Lit: Subbotin *et al.* 1995a, 8–10, 12, 15, 19, 25–26, 36–37, 61–62; fig. 3/1–3, 7–20; 4/13; 5/7; 8/7; 11/2; 20/2–9; Dobroljubskij, Dzigovskij 1981, 141–142; Dobroljubskij 1982, 39; Dobroljubskij, Subbotin 1982, 168–173; Spinei 1985, 117–118, 198, 211; fig. 26/2; 39/1–5, 7–13, 19–22, 24–25; Dobroljubskij 1986, 97–98, nr. 109, 121–122; Ursu 2010, 170, 174; fig. 4.
Ante 1975; rescue researches; 1 grave in tumulus.
Lit: Dobroljubskij, Dzigovskij 1981, 138; Dobroljubskij 1986, 95, nr. 90.

145. Tudora (= Tudorovo, Ştefan Vodă Raion; Republic of Moldova); 1959; systematic researches; 1 grave in tumulus.
Lit: Meljukova 1962, 80, 82–83; fig. 25/3; Spinei 1985, 118, 197, 222; fig. 25/1; 50/1–3.

146. Tuzla (Tuzly; Tatarbunar Raion; Ukraine); ante 1960; fortuitous find; 1 grave in mound.
Lit: Spinei 1985, 118, 209; fig. 37/3–4, 9–13.

147. Ulmeni (Buzău County; Romania); *Movila lui Reteşan*; 1983–1984; systematic researches; 2 graves in tumulus.
Lit: Constantinescu 1994, 165–168, 176–177; fig. 2–3.

148. Umbrăreşti (Galaţi County; Romania); 1973; fortuitous find; 1 grave in a natural earth elevations located NE from the settlement.
Lit: Spinei 1974, 400, 403; fig. 10/1–9; Spinei 1985, 118, 203; fig. 31/5–13.

149. Ursoaia (Căuşeni Raion; Republic of Moldova); 1983; rescue researches; 7 graves in 2 tumuli.
Lit: Čebotarenko *et al.* 1989, 109–111, 117–118, 124, 127; fig. 48; 51/3–4; 54/3.

150. Utkonosovka (Utkonosivka; Ismail Raion; Ukraine), 1970; rescue researches; 1 grave in tumulus.

Lit: Šmaglij *et al.* 1970, 15; tab. 9/17.

151. Vadul lui Isac (Cahul Raion; Republic of Moldova); 1990–1991; rescue researches; 5 graves în 3 tumuli.
Lit: Agulnikov, Ursu 2008, 62–67, 69–70, 74; fig. 2/2–5; 3/1; 5/1; 7/4.

152. Vasilevka (Vasylivka; Bolgrad Raion; Ukraine); 1985; rescue researches; 3 graves in 2 tumuli.
Lit: Subbotin *et al.* 1986, 76–78, 81–82; fig. 54/10; fig. 55/8–10; 58/3; Spinei 2009, 286.

153. Vinogradovka (Vinohradivka = Curciu; Bolgrad Raion; Ukraine); 1982–1984; rescue researches; 2 graves in 2 tumuli.
Lit: Toščev 1992, 23–24, 28; fig. 8/8.

154. Višnevoe (Vyshneve; Tatarbunar Raion, Ukraine); 1978–1980; rescue researches; 7 graves in 4 tumuli.
Lit: Dvorjaninov *et al.* 1985, 171, 173; p. 132, tab. 1; Dobroljubskij 1986, 100, nr. 138; fig. 11/11; Subbotin *et al.* 1998, 33–34, 36–37, 50–53; fig. 12/2; 13/5–9; 18/2, 5–6, 8.

155. Vităneşti (municipality of Purani, Teleorman County; Romania); 1976; systematic researches; 2 graves in 2 tumuli.
Lit: Leahu, Trohani 1978, 529–534; fig. 1–4.

156. Vladyčen (Vladychen' = Vlădiceni; Bolgrad Raion; Ukraine); 1984; rescue researches; 2 graves in 2 tumuli.
Lit: Gudkova *et al.* 1984, 234, 236; fig. 28/3; 40/1–9.

157. Ziduri (Buzău County; Romania); *Movila Orzăneasca Mare*; 1987; fortuitous find; 1 grave in tumulus.
Lit: Constantinescu 1994, 168.

158. Zîrneşti (Cahul Raion; Republic of Moldova); 1958; systematic researches; 3 graves in tumulus.
Lit: Chetraru 1969, 49–51; fig. 7; Spinei 1985, 118, 198, 211; fig. 26/4; 39/16–17, 26.

159. Žovtij Jar (Zhovtyi Yar; Tatarbunar Raion; Ukraine); 1980; rescue researches; 1 grave in tumulus.
Lit: Dobroljubskij 1986, 100, 115, nr. 141; fig. 9/1–4.

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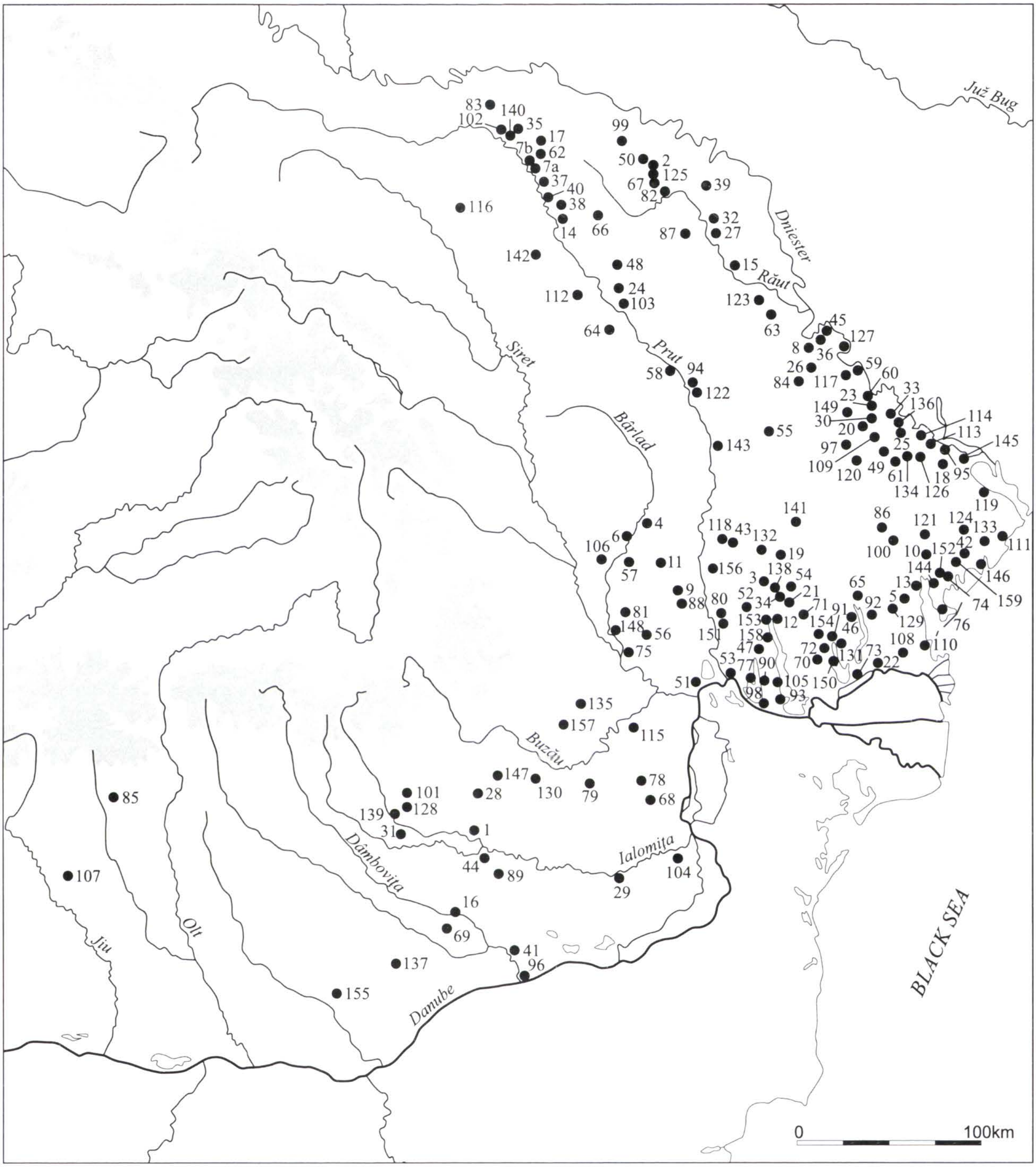
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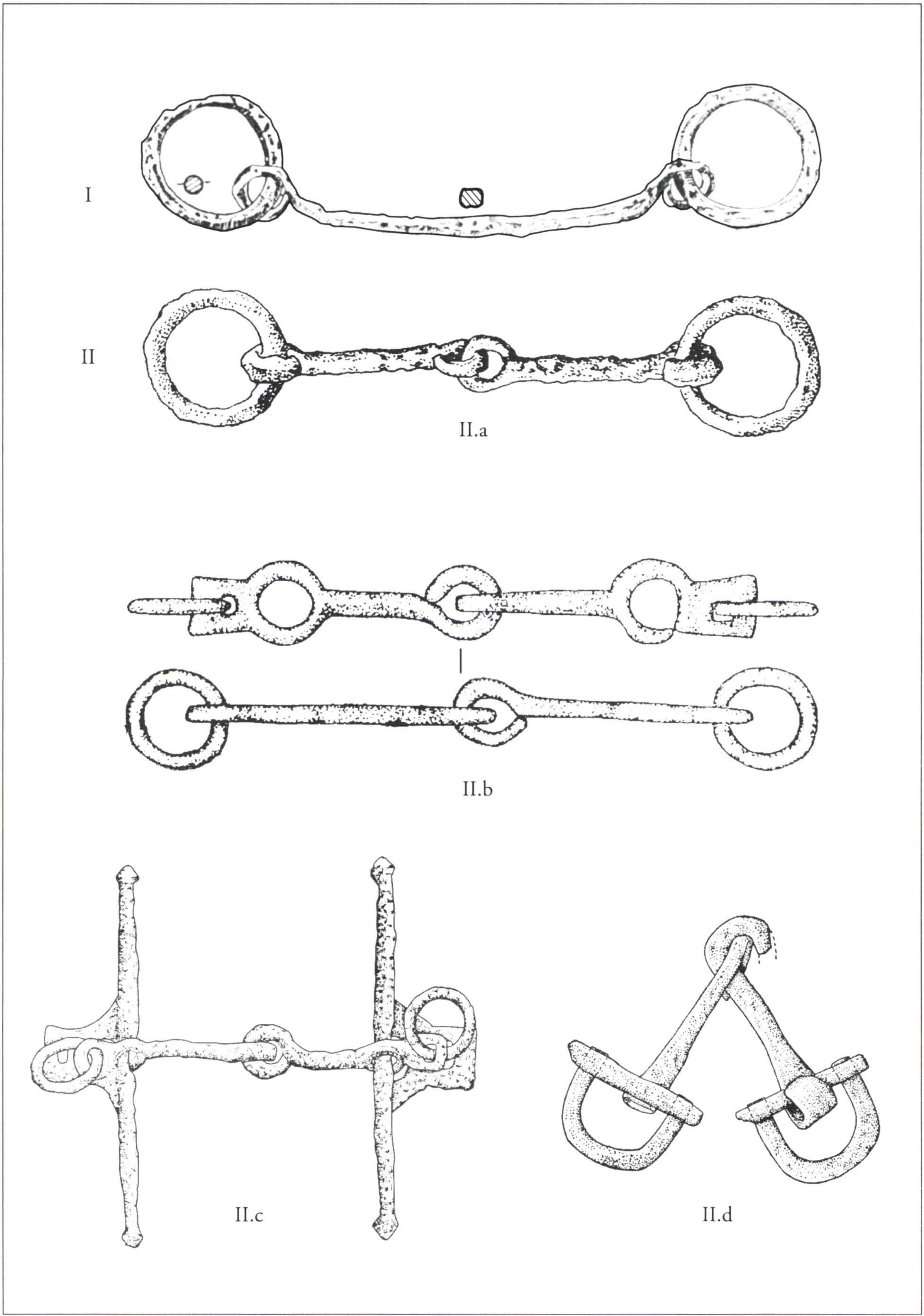
Plate 1. Sites from the area between Lower Danube, Carpathians and Dniester, they were found Turanic burials (10th-13th centuries).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II
II.a
II.b
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Plate 2. Bits: I. single-barred (according to Leahu, Trohani 1978);
II. composite – with variants: a-d (according to Spinei 1985).

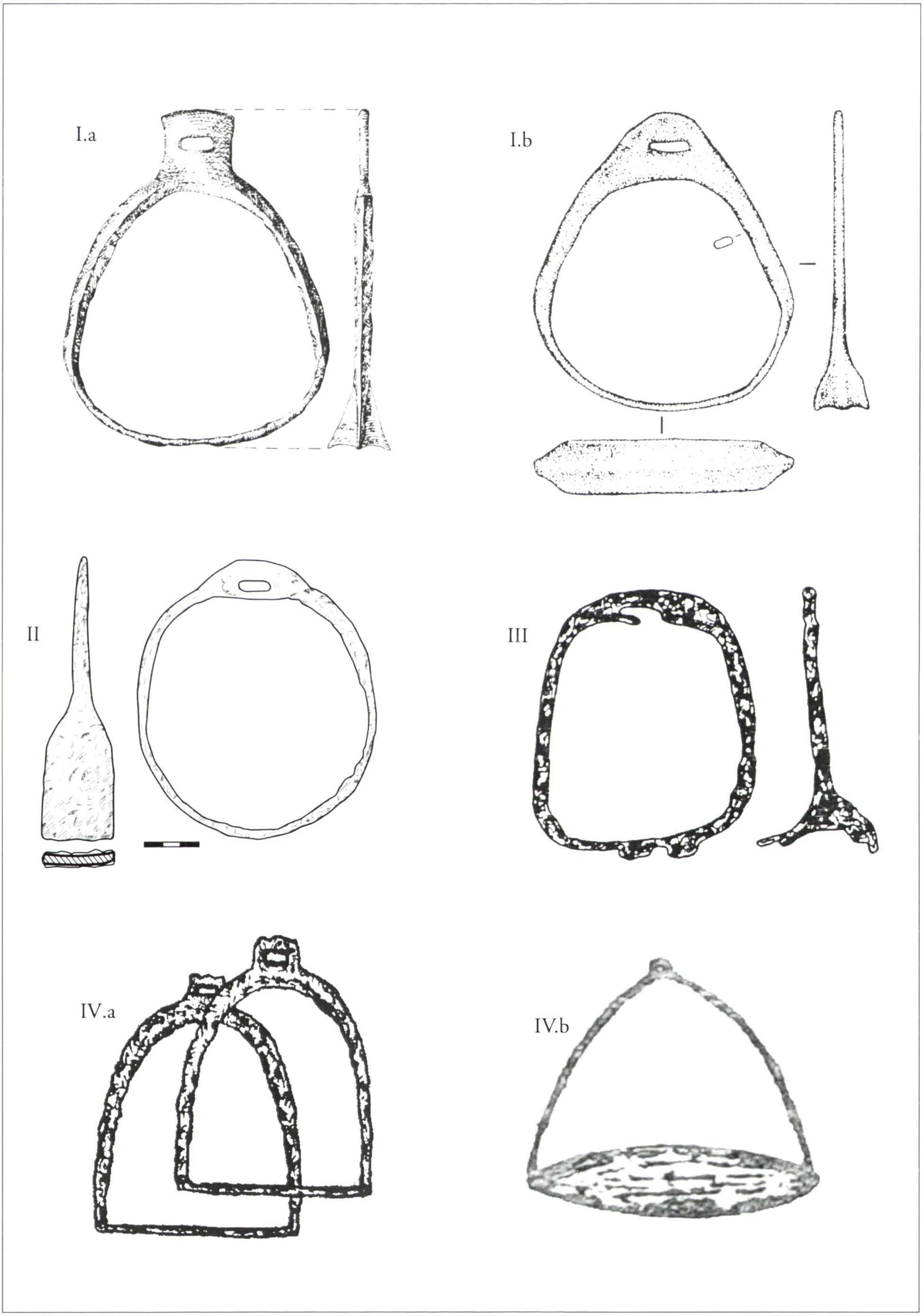

Plate 3. Stirrups: I. ovoidal – with variants: a (according to Ioniţă 2005), b (according to Spinei 1985); II. circular (according to Leahu, Trohani 1978); III. trapezoidal (according to Haheu, Gukin 1997); IV. "D"-shaped – with variants: a (according to Čebotarenko *et al.* 1989), b (according to Gudkova et al. 1981).

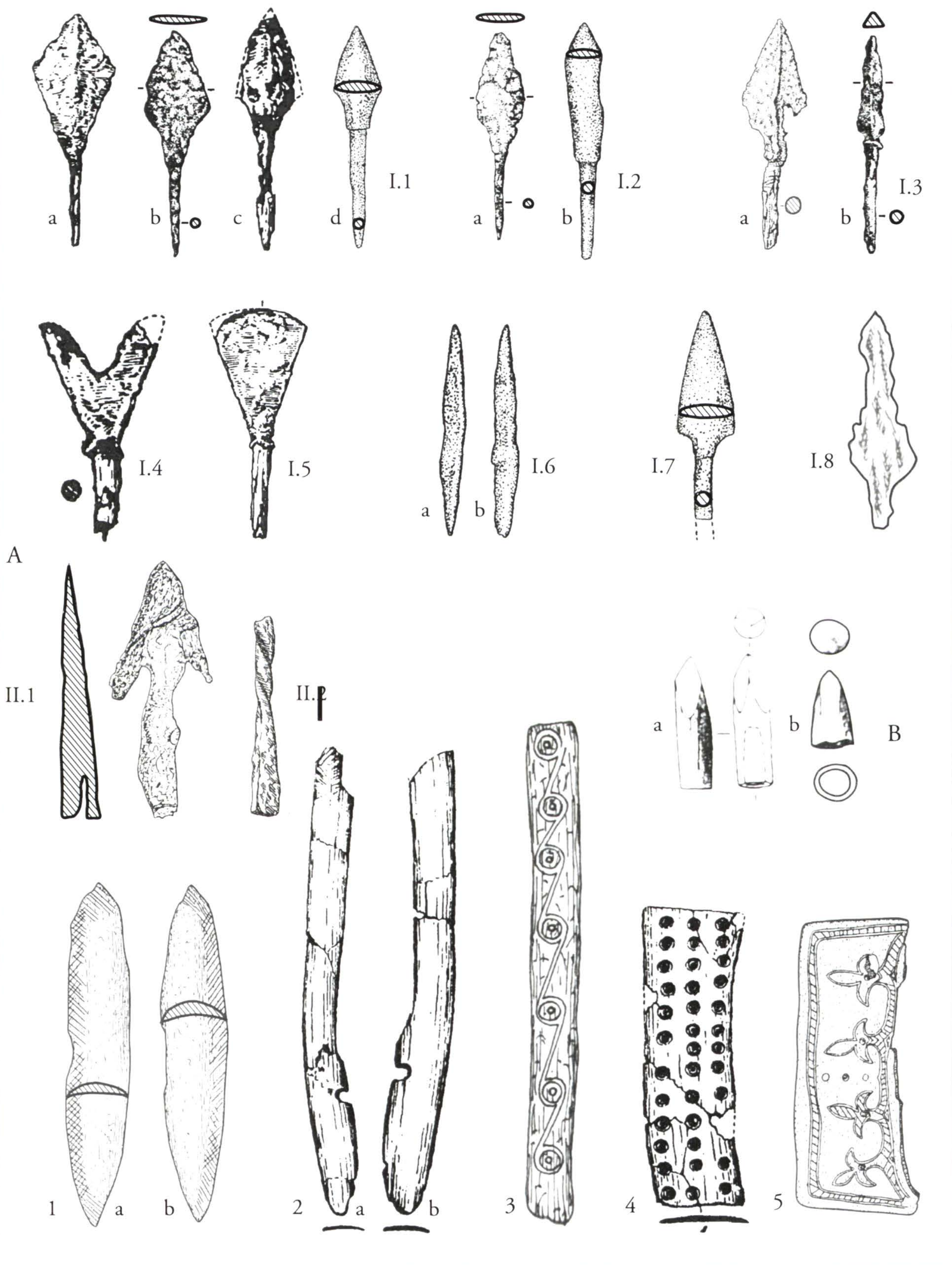

Plate 4. Arrowheads: A. iron: 1. with spike for hafting – with variants: 1-8 (1-2, 3b, 6-7 according to Spinei 1985, 3a according to Maxim-Alaiba 1987, 4-5 according to Grosu 1981, 8 according to Constantinescu 1994); 2. with socket – with variants: 2.1 (according to Vysockij 1992), 2.2 (according to Popescu, Vulpe 1966); B. bone: a-b (according to Subbotin *et al.* 1995a); Worked bone plates: 1-2 from the bow; 3-5 from quiver or from others (1, 5 according to Jarovoj, Čirkov 1987, 2, 4 according to Grosu 1981, 3 according to Jarovoj *et al.* 1990).

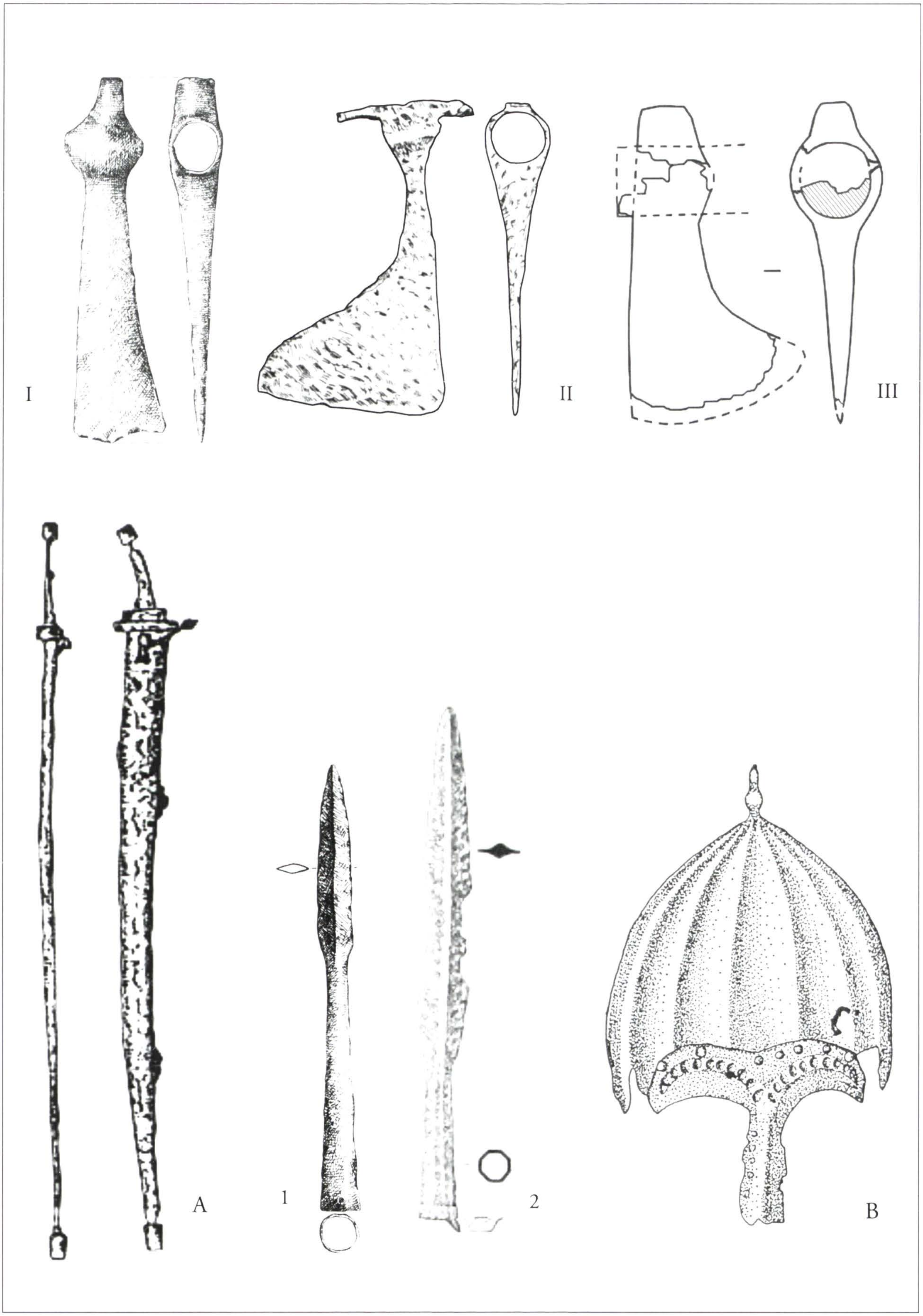

Plate 5. Axes: 1 (according to Ioniţă 2005), 2 (according to Leahu, Trohani 1978), 3 (according to Vlasenko, Bikbaev 2009); A Saber (according to Vysockij 1992); Lance heads: 1 (according to Ioniţă 2005), 2 (according to Popescu, Vulpe 1966); B Helmet (according to Spinei 1985).

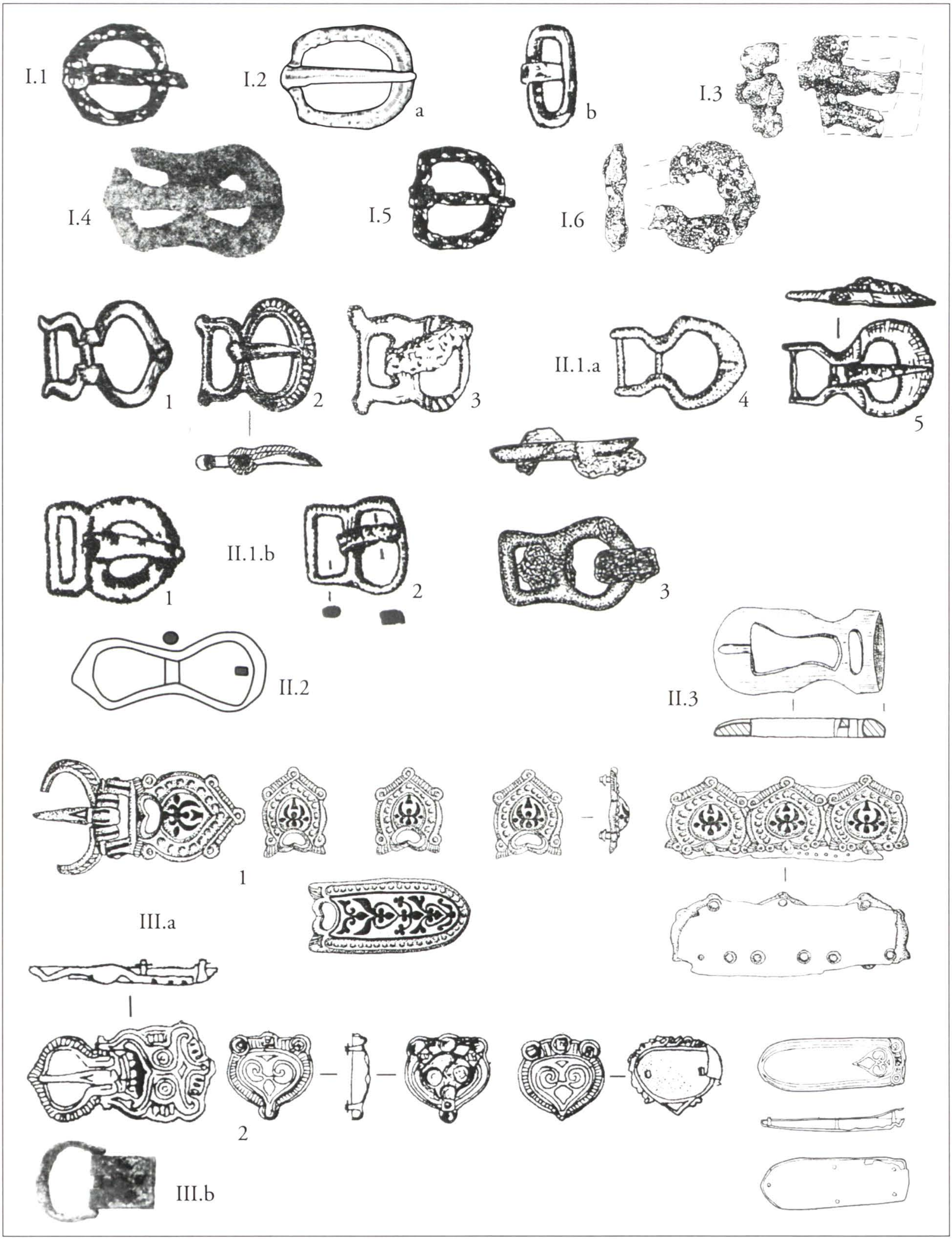

Plate 6. Buckles: 1. with simple loop – variants: 1-6 (1, 5 according to Haheu, Gukin 1997, 2.a according to Leahu, Trohani 1978, 2.b according to Rafalovič, Lăpuşnian 1974, 3, 6 according to Bubulič 1992, 4 according to Spinei 1985); 2. with double-loop – variants: 1-3 (1.a.1 according to Leviţki, Demčenko 1994, 1.a.2 according to Subbotin et al. 1984, 1.a.3 according to Demčenko, Čebotarenko 1988, 1.a.4 according to Spinei 1985, 1.a.5, 1.b.2 according to Postică et al. 1995, 1.b.1 according to Rafalovič, Lăpuşnian 1974, 1.b.3 according to Larina et al. 2008); 2.2 (according to Andruh et al. 1985), 2.3 (according to Subbotin 2001); 3. with strap plate – variants: a-b (3.a.1 according to Jarovoj, Čirkov 1987, 3.a.2 according to Subbotin *et al.* 1995a, 3.b according to Gudkova *et al.* 1981).

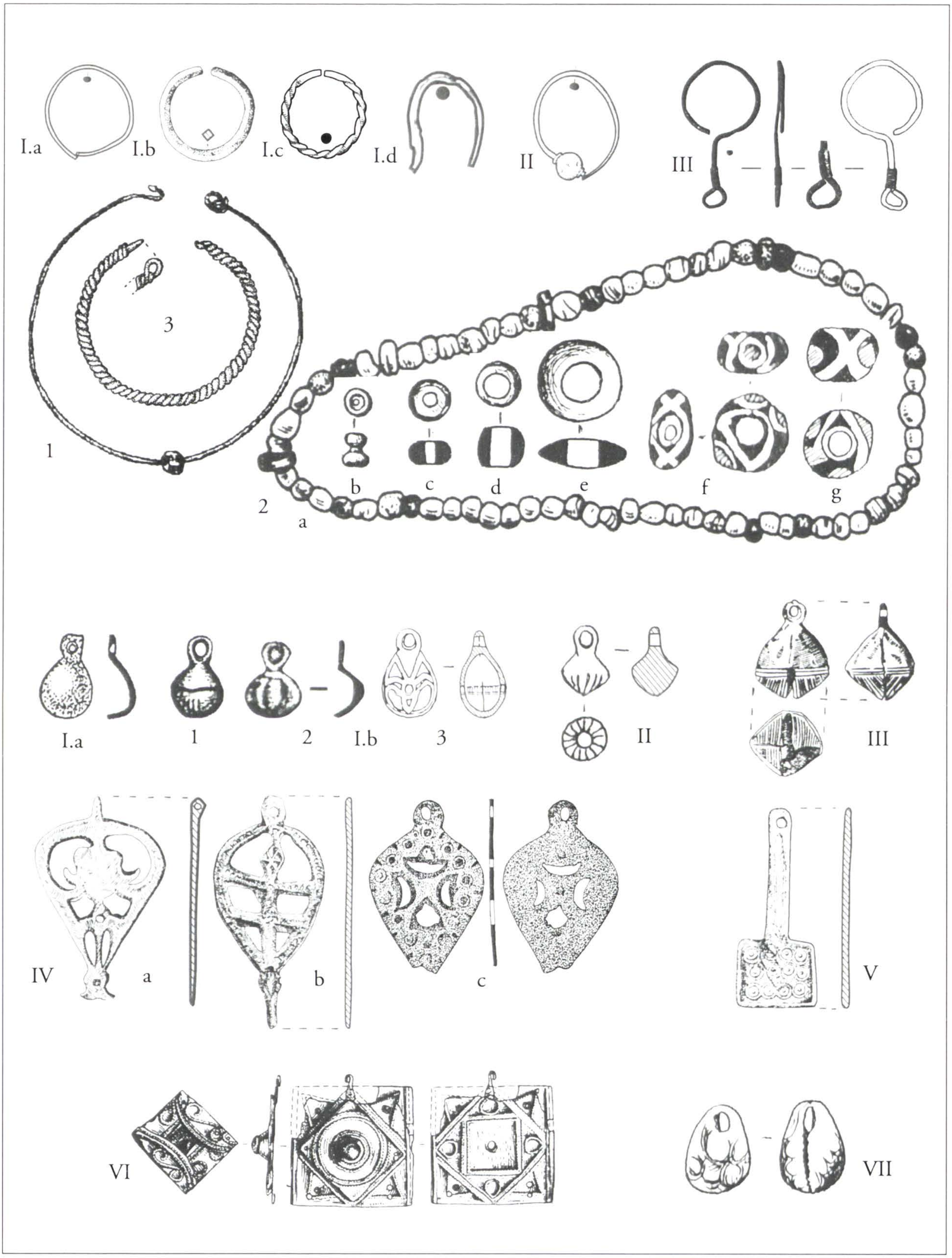

Plate 7. Earrings: 1-3 (1.b according to Spinei 1985, 1.c according to Nestor et al. 1952, 1.d according to Gudkova *et al.* 1984, 1.a, 2 according to Simion et al. 2004, 3 according to Vlasenko, Bikbaev 2009); 1. Necklace (according to Leviţki, Demčenko 1994); 2. Beads (a according to Rafalovič, Lăpuşnian 1974, b-e according to Subbotin 2001, f-g according to Subbotin, Subbotin 1994); 3. Bracelet (according to Spinei 1985); Pendants: 1-7 (I.a, I.b.1-2 according to Larina et al. 2008, 3, 4.a-b, V according to Spinei 1985, 4.c according to Kurčatov 1991, 6 according to Rafalovič, Lăpuşnian 1974, 1.b.3, 2, 7 according to Subbotin, Subbotin 1994).

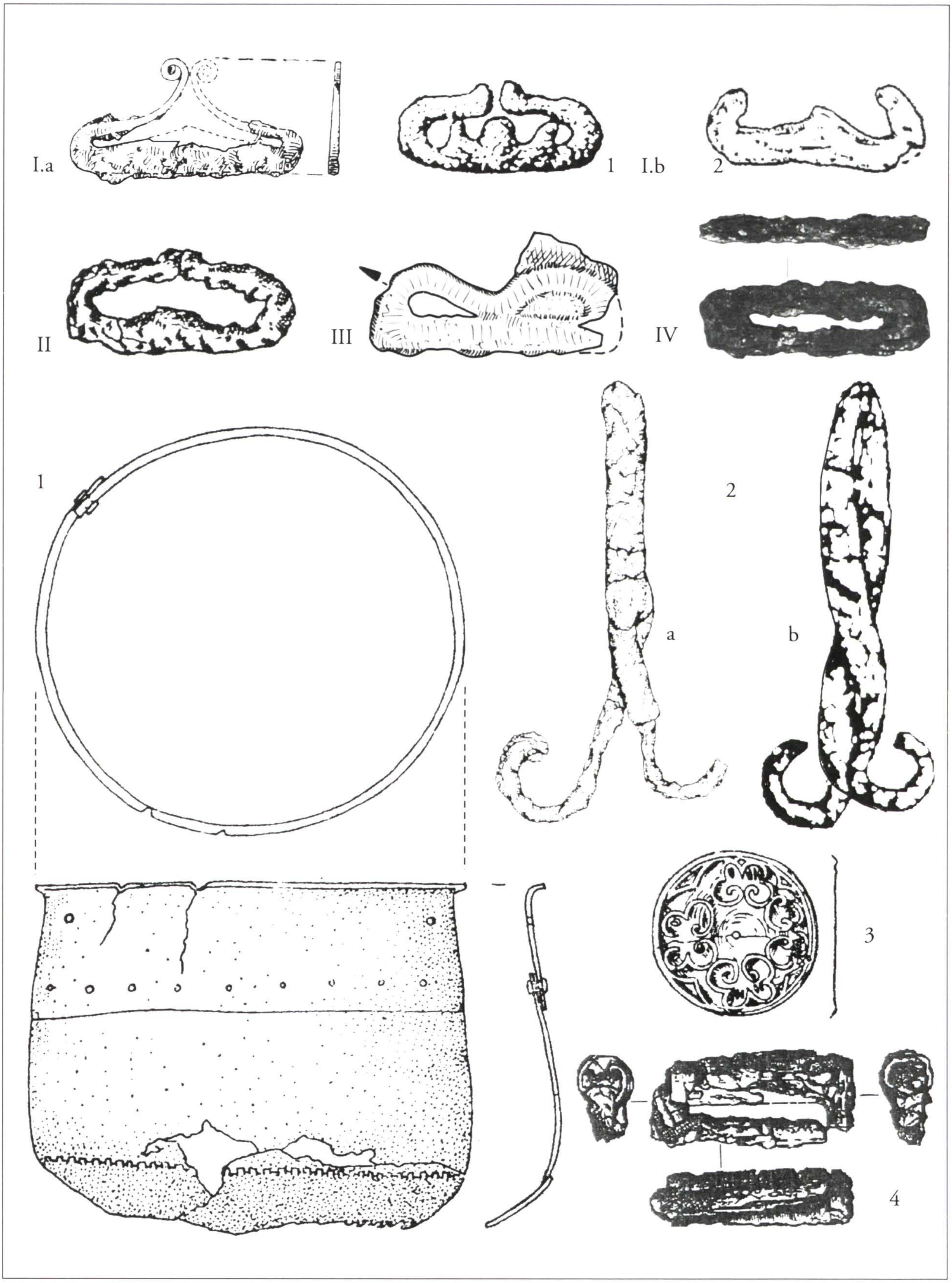

Plate 8. Iron strike-a-lights: 1.a (according to Berciu 1959), 1.b.1 (according to Dergacev 1982), 1.b.2 (according to Rafalovič, Lăpuşnian 1974), 2 (according to Borziak, Levițki 1989), 3 (according to Harţuche, Anastasiu 1980), 4 (according to Vlasenko, Bikbaev 2009); 1. Copper cauldron (according to Spinei 1985); 2. Scissors: a (according to Simion *et al.* 2004), b (according to Dergacev 1984); 3. Silver mirror (according to Rafalovič, Lăpuşnian 1974); 4. Padlock (according to Subbotin *et al.* 1998).

Can One Use the Results of ^{14}C Analyses to Perform Historical Interpretations? The Case of the 10th century Funerary Site in Cluj-Napoca-Zápolya Street*

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Abstract: *the archaeological site known in specialized literature as Zápolya Street (sometimes Dostoievski Street, the present-day General Traian Moșoiu Street) is located ca. 1430 m SE of the present-day city center, on the northern edge of the third terrace of River Someș, also known as Pietroasa inferioară. As this is one of the most researched funerary sites of the era in the Transylvanian Basin, it benefits from numerous more or less detailed analyses. The combined analyses point to the wide variability of the dating of each grave and the danger of drawing pertinent and clear conclusions regarding the period when this/these micro-communities settled in the area. The combined data of the burials have revealed no dating earlier than 925/930 and no dating later than 970/980. As no data are available on whether the individuals in question had been born there or elsewhere, when they arrived in the area of Cluj-Napoca, or how much time they spent there, the issue must remain open until new research on the matter.*

The funerary spot in Cluj-Napoca-Zápolya Street was most likely already in use (see the dating of Grave 6) during the first half of the 10th century. This also means that the process of conquest and immigration of the newcomers reached the basin of Someșul Mic rather early. Nevertheless, the nature of the conquest, as in the case of all nomad groups, must not be viewed from a territorialist perspective; the main goal of either nomad power structure was to control the natural resources (especially the salt-rich areas in the case of the Transylvanian Basin), the population, and the pastures, facilitated by the infrastructure of roads built during the past Roman Era.

Keywords: *10th century, Cluj-Napoca-Zápolya Street, ^{14}C analysis, Hungarian conquerors*

Introduction and research topic. Cluj-Napoca, the center of the hydrographic basin of Someșul Mic (fig. 1), is located, from a geological perspective, on the Tisa unit which is a continental fragment caught in the Alpine folding system. The morphology of the present surface around the area discussed in this study has been completed during the Quaternary (the last 2.5 million years in the geological history of the Earth), modeled through fluviatile erosion; still, slope processes have also been substantial, more intense during the glacial periods both in the areas of the Transylvanian Basin with hard rocks and in those consisting mainly of poorly consolidated deposits.

Through the changes triggered by the succession of glacial and inter-glacial periods, fluviatile erosion went through more intense and slower phases, leading, eventually, to the formation of wide alluvial fields. During the intense phases the river bed of Someşului Mic deepened and left the old alluvial field, transforming into a suspended fluviatile terrace. Thus, seven multi-tiered terraces, in places just caused by erosion, in places with preserved fluviatile deposits, were formed in the area of Cluj, just like in the entire Transylvanian Basin[1]. These terraces, both in the area of Cluj

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[*] This paper was supported by the Thematic Excellence Programme – NKFIH-832-15/2019 – 'Late Avar Reform and consequences'.

[**] English translation: Ana Maria Gruia. Drawings: Edit Ambrus.

[1] Savu *et al.* 1973.

and in the Transylvanian Basin, display a very strong N–S asymmetry, caused by the pressure exerted on the E–W oriented courses of gelisolifluxion that was stronger on the slopes with northern exposure[2]. This triggered a more extensive development of the terraces on the right bank of Someşul Mic, but also caused the loss of integrity of the upper terraces through slope movements[3].

The extended terrace II or the city terrace (10–16 m) is the most favorable to human settlement. On the one hand it provides protection against the strongest floods and optimal stability for buildings, on the other hand, through the proximity of phreatic water and the presence of springs that usually feature in the front of the low terraces, it ensures a permanent supply of vital drinking water.

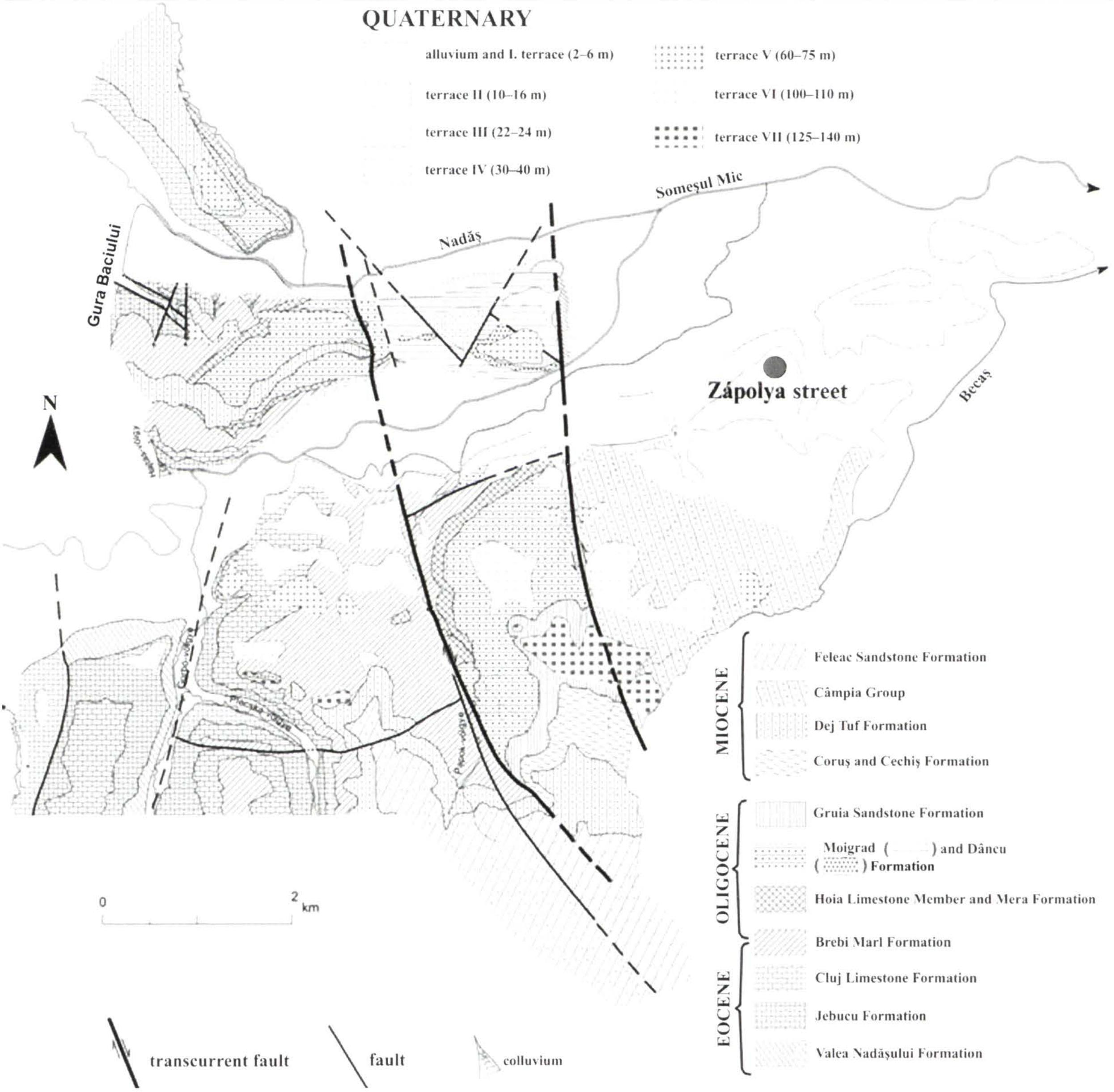
QUATERNARY
alluvium and I. terrace (2–6 m)
terrace II (10–16 m)
terrace III (22–24 m)
terrace IV (30–40 m)
terrace V (60–75 m)
terrace VI (100–110 m)
terrace VII (125–140 m)
Someşul Mic
Nadăş
Gura Baciului
N
Zápolya street
Becaş
0
2 km
MIOCENE
Feleac Sandstone Formation
Câmpia Group
Dej Tuf Formation
Coruş and Cechiş Formation
OLIGOCENE
Gruia Sandstone Formation
Moigrad ( ) and Dâncu ( ) Formation
Hoia Limestone Member and Mera Formation
Brebi Marl Formation
EOCENE
Cluj Limestone Formation
Jebucu Formation
Valea Nadăşului Formation
transcurrent fault
fault
colluvium

Fig. 1. Geological map of part of the city of Cluj-Napoca, with the location of the archaeological site (marked through a red circle)

The archaeological site known in specialized literature as Zápolya Street (sometimes Dostoievski Street) is located ca 1430 m SE the present-day town center, on the northern edge of the third terrace of River Someş, also called Pietroasa inferioară. This is the exact location of the researched archaeological site, on the very edge of the city terrace, in a spot where the valley of Someşul Mic has exited the area covered with harder Eocene–Oligocene rocks (between Cetăţuia Hill and Hajongard Hillside), into the area of Miocene-era poorly consolidated deposits; in time, the river levelled wide alluvial fields and left behind extended fluviatile terraces. The surrounded vast plain surfaces have provided an excellent terrain for agricultural cultures and pastures.

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[2] Wanek, Poszet 2010, 80–81.

[3] Wanek, Poszet2011, 88–89.

One can easily observe on the first military Josephine Map the small valley that divides the terrace in two (Pl. 1/1). The former street Pietroasa (today Aurel Suciu Street) runs up this valley and then splits on the edge of the upper part. The former Zápolya Street (also called Dostoievski for a while), the present-day General Traian Moşoiu Street, runs westwards, while the former Kalevala Street (today Semenicului Street) runs eastwards. Thus, the graves on Zápolya Street were in fact found starting with the end of the terrace, followed by the small valley (Pietroasa Street). However, three other graves also dated to the 10th century, were discovered (in 1944) after the little valley (Pietroasa Street), but also on the terrace III, in front of the building at no. 4 on Kalevala Street, under the road (Pl. 1/2)[4].

The burial ground in Zápolya Street has been located on a plateau ending in a very steep slope, measuring 45–60° degrees, generating a difference of ca. 5 m. The remains of the Roman road running northwards, most certainly visible during the 10th century, were probably found not far from the base of the slope *(*Pl. 7*)*. The burial ground was partially researched in the southern areas of the plots at nos. 78 and 76, over a length of 42–43 m along the E–W direction. The 1911 and 1942 excavations extended over 18–19 m in width *(*see also Pl. 1/2, Pl. 2).

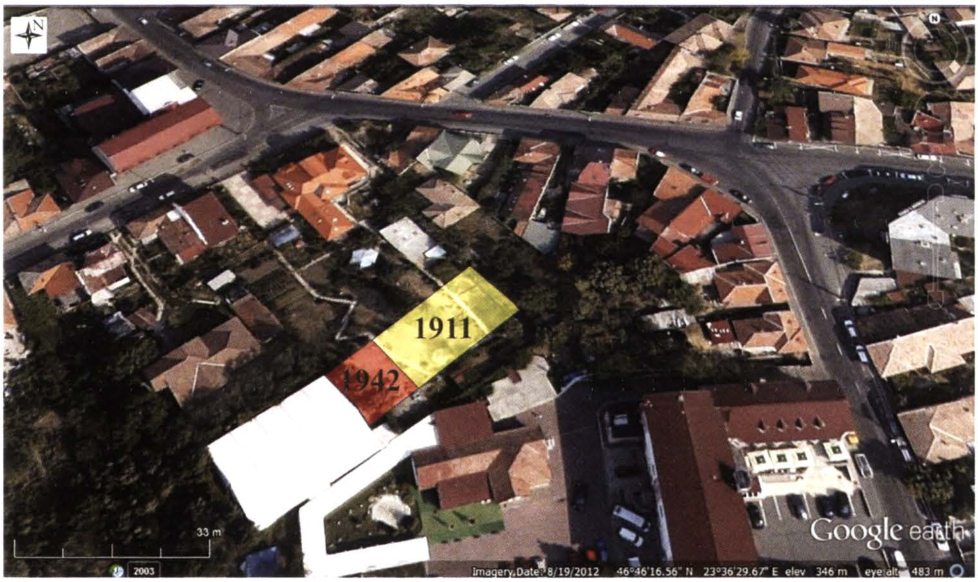
1911
1942
33 m
2003
Google earth
Imagery Date: 8/19/2012 46°46'16.56" N 23°36'29.67" E elev 346 m eye alt 483 m

Fig. 2. The extent of the areas researched in 1911 and 1942.

Based on Kovács's 1911 documentation one can state that the graves were located on the margin of the burial ground and that the latter extended southwards towards the present-day Albini Street. On the other hand, the northern side can be considered to have been fully researched.

Based on the ground plan of the excavation performed by István Kovács grave no. 2, located east of the group of graves nos. 3–5 that form a distinct group, probably belongs to another group. In our opinion, graves 2, 6 and 7 also belong to separate groups of graves (Pl. 2).

In the summer of 1942 the excavations continued on the plot at no. 76, but no planimetry of these excavations has been performed. Gyula László researched three other graves west of graves 2, 6 and 7, situated "in a row" (according to him)[5] (Pl. 2).

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[4] Considering the fact that the term was adopted as such in the specialized literature, we chose to continue using it. Gáll 2013a, Vol. I: 257–258, vol. II: Pl. 115–116.

[5] László 1942, 578.

The excavations did not / could not be unfortunately continued southwards, towards the street called *Méhes* at the time (today Septimiu Albini) and the area is currently occupied by buildings. The researches could continue in the end of plots nos. 76–62, located in the edge of the plateau. Unfortunately, there is almost no possibility to continue the research to the south-east due to ongoing constructions.

The analysis of the recovered anthropological material can be presented in an abstracted form in the following table, as, like we will see in the end, it is important to certain conclusions[6]:

No. of the graves	Gender	Age	
Grave 1	Male	35–55	*Adultus/Maturus*
Grave 2	?	?	
Grave 2	?	6 years 3–7 months	*Infans I*
Grave 4	Male	23–60	*Adultus/Maturus/Senilis*
Grave 5	?	23–32 years	*Adultus*
Grave 6	Male	54–71	*Maturus*
Grave 7	Female	54–68	*Maturus*
Grave 10	Male	35–40	*Maturus*

Fig. 3. Results of the anthropological analysis

We have published the entire archaeological material – mostly as technical drawings – in 2013, together with its detailed analysis[7]. In the specialized literature the funerary spot has been generally connected to the "conquering Magyars"[8] and only in our 2013 analysies we have put forward a more nuanced approach to these interpretations (a heterogeneous group created in the course of the 10th century)[9] that are strongly marked by the nationalism of the 19th century, namely the modern *nation-building*. It is, at the same time, very clear that the burials on this funerary site belong to the funerary horizon of the 10th century and one must exclude both earlier and later datings.

We have been compelled to continue the analysis because some of the anthropological material has been determined in the meanwhile and was unknown prior to 2013; it was analyzed through the *NKFIH* project[10]. The project has also included the first radiocarbon analyses that support a better dating of the funerary site, but also raise a series of questions that we shall discuss below.

Thus, overall, a new debate on the chronology of the graves part of this funerary area, especially those that produced the ^{14}C samples, has become topical again. Based on these facts, the comparative analysis of the archaeological material with new ^{14}C dates – even partial ones – can not only refine the period during which the burial ground has been in use, but also supports certain methodological approaches that are also suggested in the article's title.

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[6] Their entire anthropological material will be published: Gáll et al. 2019, u.pr.

[7] Gáll 2013a, Vol. I: 268–292, Vol. II: Pl. 117–137; Gáll 2015, 350–404.

[8] We only use this term from a structuralist perspective, not from an ethnical / ethnicist point of view. Thus, it can be applied to the graves that display several very specific characteristics: the ritual of depositing horse remains, the specific set of weapons (sabre, quiver, arrowheads), harness elements with specific types of stirrups and bids. One can only (possibly) differentiate between conquering Magyars and the structural integration of other groups of populations that imitated the funerary habits of the newly arrived clans, and can only decid according to context.

[9] "These two observations concerning the Cluj communities might lead to the supposition that, firstly, the area of the Little Someș might have been occupied by a population with various burial traditions, which might indicate the varied origin of this population. This is quite firmly supported not only by archaeological but also anthropological research69. Secondly, the sabre is the primary status symbol in the graves of mature males and can be identified as a symbol creating group identity. From these observations concerning the professional warrior class of the 10th century power centre, one can see a greatly varied population with individuals of different origins. These communities are organised here, in the Cluj region, and their statuses are indicated by the weapons placed in their graves" Gáll 2013b, 479–480.

[10] NKFIH: Nemzeti Kutatási, Fejlesztésiés Innovációs Hivatal, Magyarország (The National Office for Research, Development and Innovation, Hungary) (OTKA/NKIFH no. 106369).

A few methodological observations regarding the connection between the archaeological material, the "population pyramid" and the employed term of "first generation". The term "first generation" understood as the sociological group of those individuals of the communities from the end of the 9th century who were born in the so-called *Atelkuz* area[11] but were buried in the Carpathian Basin spread without any deep theoretical backing in the archaeology of the 10th century, especially after K. Mesterházy's 1990 article[12]. Specialists have almost entirely ignored the socio-demographical problem that arises, namely the fact that each population consists of individuals of various ages, thus one can speak of age groups. The new conquerors, like any other human society, represented a biologically varied community, with individuals ranging from infantile to senile – and the chronological analyses have rather ignored them. As an example, an individual born in the *Atelkuz* could have died around the year 900 or might have lived until the 930s–940s or even the 950s (reaching an old age). A hypothetical comparison of the archaeological "luggage" of an individual who died around the year 900 as *juvenile*, with that of a senile individual from the 1930s – 1950s or even the 1950s would reveal striking differences, despite the fact that both individuals played an active role in the migration from the end of the 9th century!

The term "first generation" should thus be nuanced, from at least two perspectives:

1. From the biological perspective of the individuals who took part in the migration, one should also take into consideration the term "age group";
2. The contextual analysis of the dynamic nature of material culture, in the case of which one can ask various questions. There are more numerous difficult methodological problems, namely: which of the artifacts can be determined as produced in the Orient and brought to the Carpathian Basin through migration in the end of the 9th century and can one identify mixed elements in the graves: on the one hand artifacts brought from the Orient and on the other hand objects produced and acquired here?

As a methodological conclusion, the analyses must be restricted to combining the data regarding the biological age of the individual, the characteristics of the dynamism of material culture, to which one should mandatorily add – as much as possible – ^{14}C analyses. We have attempted to illustrate the issue through the following diagram:

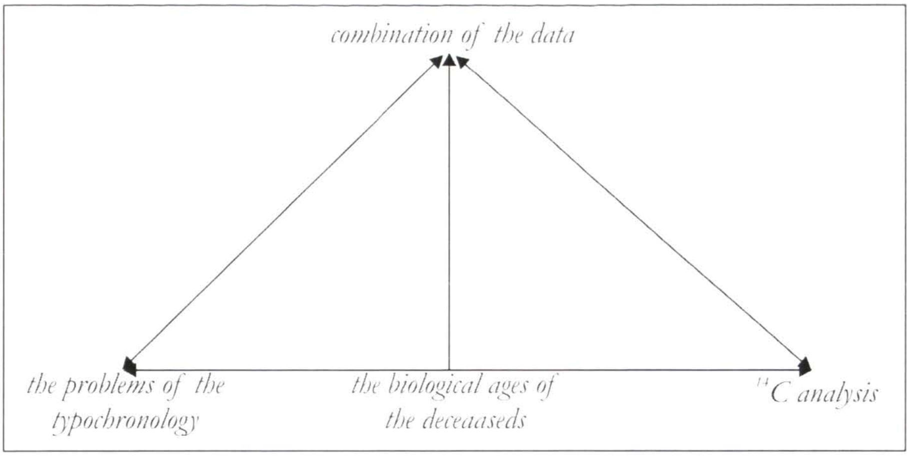
combination of the data
the problems of the typochronology
the biological ages of the deceaseds
14C analysis

Fig. 4. The methodology of combining different data

The issue of dating the graves through classical archaeological methods. As this is one of the most researched funerary sites of the era in the Transylvanian Basin, it has benefited from numerous chronological analyses, more or less detailed. Shall henceforth present a synthesis of the dating of the graves through classical typo-chronology.

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[11] The micro-region was mentioned by the Byzantine Emperor Constantine VII Porphyrogenitus. In this sense, see: Harmatta 1984, 419–431.

[12] Mesterházy 1989–1990, 235–250, 15. kép.

From a chronological perspective, among the materials found in the graves one notes, foremost, those in graves nos. 10 and 11. As for the richest grave, no. 11, we were able to observe the intense wear and tear of the rectangular applique, indicating without doubt the fact that the item that lacks exact analogies in the Carpathian Basin has been worn for a long time. Other items, mainly the stirrup from grave 11, pear-shaped, type IA1[13], with analogies only inside the Carpathian Basin, have been in use for much shorter periods. We believe one cannot much thinking that these items might have been deposited in the grave during the second third of the 10th century. If the first item can be connected from a cultural perspective to the "first generation", the stirrup only points to analogies in the area of the Upper Tisa[14], lacking analogies east of the Carpathian Basin. This case shows that from a biological perspective, the individual in grave no. 11 could have belonged to the "first generation" (how could he have been born already in the Carpathian Basin), but from a chronological perspective he displays mixed elements; thus, one can see in this looted grave the archaeological combination of the different chronological elements.

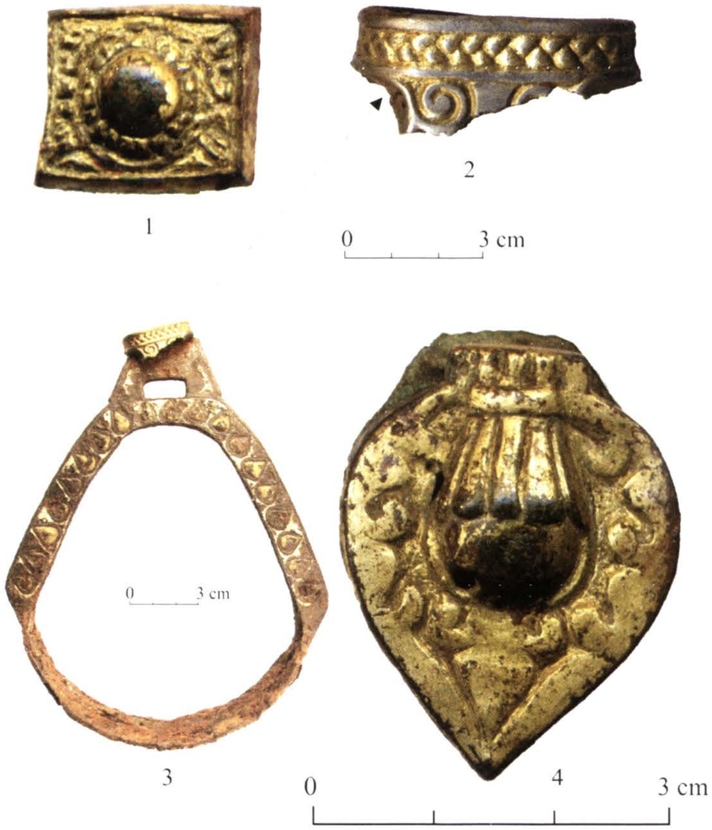

Fig. 5. The artefacts from the grave 11

The case of grave 10 is even more interesting. The grave, researched by Gyula László, has revealed a quiver or bag hanger, analogies for which have been identified in the area of Kiev. Based on these analogies the individual has been interpreted as belonging to the "first generation". The anthropological analysis performed by Szilárd Gál indicates the fact that the deceased was an individual aged 35–40 years. If the male died during the first third of the 10th century, he had reached a mature age when he arrived in the Carpathian Basin. On the other hand, if he died during the 930s, he could have taken part in the sociological and military phenomenon of homeland changing only during childhood. As he shall subsequently show, this observation is not fully supported by the ^{14}C analyses (Pl. 5–6).

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[13] Gáll 2015, Table 1, Fig. 8–9, fig. 15–16, Plate 1.

[14] See the debate, with analogies Gáll 2015, 380–384.

Graves nos. 6 and 7 can be dated to the first two thirds of the 10th century, grave no. 1 and the group of graves 2–5 can be dated to the middle of the century based on the grape-bunch-shaped earrings analyzed before. At the same time, the group of graves 2–5 is located on the margin of the terrace and thus these were probably the last ones excavated (Pl. 3–4).

Thus, longer or shorter chronological hiatuses certainly existed between the burials. One must mention the fact that burial grounds of the same type as the one in Zápolya Street could contain up to 80–100 graves. As previously mentioned, according to Gyula László, graves 1–2, 6–7 belong to a single group, but in our opinion each grave is part of a different group. Based on these observations and the typo-chronological analysis of the inventory we date the burial ground fragment to the 925–970/980 period.

The issue of dating graves 6 and 10 through ^{14}C analyses. We were able to collect samples from graves 6 and 10. Based on the analyses and the calibrations, as one can see in fig. 6–7, grave 6 can most probably be dated, among the multitude of possible datings, to 930–940, and grave 10 to 955–965.

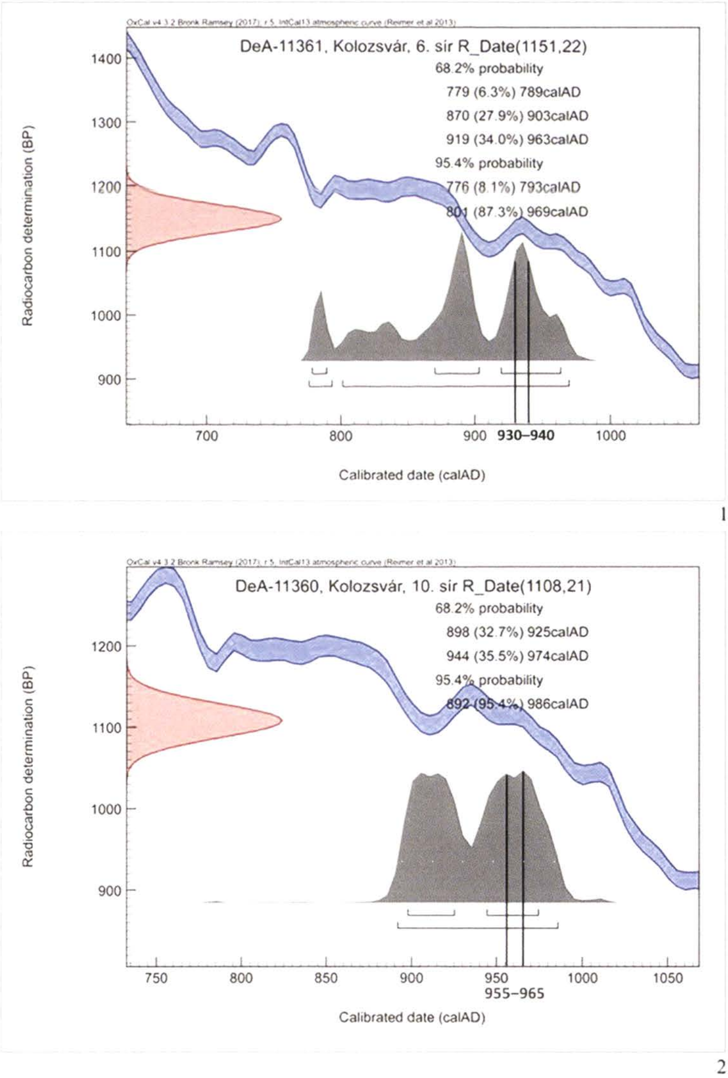

Fig. 6. ^{14}C analyses of samples from grave 6 and grave 10

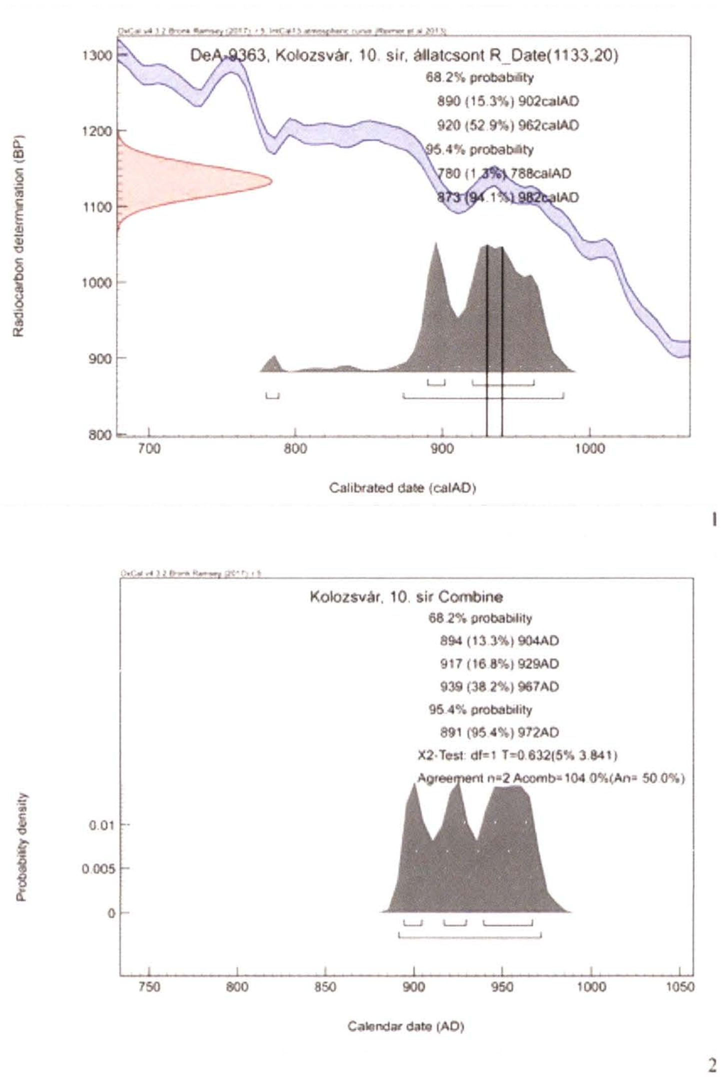

Fig. 7. ^{14}C analysis of the sample from grave 10

These datings support the archaeological observations performed on the basis of the archaeological material.

Conclusions: the combination of archaeological dating and ^{14}C dating with the data regarding the biological age of the skeletons. As one can see the archaeological and the ^{14}C datings generally indicate the possible dating especially to the second third of the 10th century. Based on the biological age indicated by the analysis of the skeletons one can reach a large variation of socio-historical interpretations, thus showing how relative historical interpretations based on the archaeological material are. At the same time we must mention the fact that the graves do not form a unitary group, so that significant chronological differences in their dating might have existed. At the same time, without being able to perform *strontium stable isotope* analyses, we cannot answer the following basic question: were the individuals buried in Cluj-Napoca-Zápolya Street born already in these areas or did they arrive from elsewhere? Still, several observations – raising numerous questions – can be formulated based on this set of data. These are only the observations with the highest probability.

1. The male skeleton in grave 6 indicates that the individual died at an age between 54 and 71 years. He could have taken part in the socio-historical process of migration from the Orient to the Carpathian Basin if he was buried in 930–940 (which was very likely the case).

2. On the other hand, the individual buried in grave 10 most probably died in 955–965, at the age of 35–40 years, and was thus probably born in 915/20–925/930. Biologically, he was in fact part of the second or third generation after the migration from the end of the 9th century.

3. Such observations can also be made in the case of graves nos. 1, 4, 5, and 7 that unfortunately did not benefit from ^{14}C analyses. Thus, the female in grave no. 7 was most certainly born either before the 10th century or during the first two decades of the century – considering the fact that the anthropological analyses performed on the skeleton have indicated that the age of the individual was between 54 and 68 years at the time of death. Still, based on a less than uncertain dating, the grave cannot be dated more narrowly than 900–970. Thus, considering the fact that the female died at the age of 54–68 years, she could have been born both during the ninth and in the 10th century.

The man in grave no. 1, aged 35–55 years at the time of his death, could have been born sometime during the first two decades of the 10th century. With this great variability in age, on the basis of the archaeological inventory that can be dated around the middle of the 10th century, one can presume he born either in 900 (if he died at 55) or in 920 (if he died at 35).

The woman (?) in grave 5 could have been born during the first third of the 10th century, but one cannot exclude the period towards the middle of the century, as she died at an age between 23 and 32. In the case of grave 4 on the other hand one could formulate numerous combinations as the bones have been very poorly preserved (23–60 years).

The subsequent figure shows the diagram in which we have attempted to combine all the data:

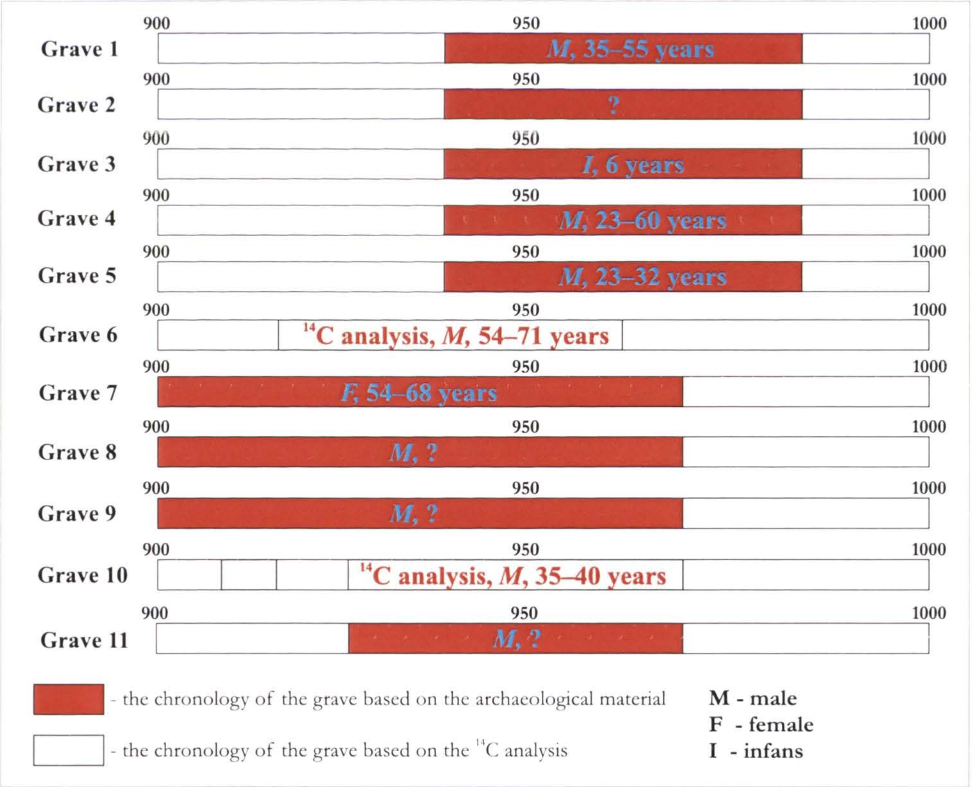

Fig. 8. The combination of archaeological and ^{14}C datings and the data regarding the biological age of the skeletons

Without "historical" conclusions? In the end of this brief analysis one must ask the following question: can the results of ^{14}C analyses be used in combination with other types of sources in historical interpretations? As in our 2013 analyses we have nuanced the rather simplistic interpretations existing so far[15], in the present paper we wish to bring a further nuance to the issue. Thus, on the basis of the great variability of dating that we have previously presented, one can make two observations:

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[15] Thus, we did not interpret the micro-communities from Cluj-Napoca as consisting of *conquering Magyars*, but as military communities organized in the area during the tenth century. Gáll 2013b, 479–480.

1. Previous analyses have demonstrated the fact that the micro-community from Cluj-Napoca-Zápolya Street had certainly settled in that micro-region during the first half of the 10th century. At the same time, the great variability in dating in the case of each grave draws attention to the danger of drawing clear and pertinent conclusions regarding the period when this/these micro-community/communities settled in the area. The combined data regarding the burials show no earlier dating than 925/930 and no later dating than 970/980. Since no data are available regarding the place of birth of these individuals (here or elsewhere), when they arrived in the area of Cluj-Napoca, how long they spent there, the issue must remain open until new researches.

2. Another simplistic and superficial question that representatives of East-Central European archaeology still could not get rid of after 150 years, cannot and probably will never find an answer based on available archaeological data: "when did the conquering Magyars occupy Transylvania (?)"[16], i.e. the exact year (even if some have suggested the year 896, others 950 or even after the year1000).

Nevertheless, the funerary spot in Cluj-Napoca-Zápolya Street was most probably in use (see the dating of grave 6) already in the first half of the 10th century and this means that the process of migration and conquest reached these parts rather early. Still, like in the case of any nomadic group, the character of the conquest must not be regarded from a *territorialist* perspective,[17] as the main goal was to control the resources of the areas (especially the salt areas) and to gain access to pastures. This was facilitated by the infrastructure of the roads created during the former Roman Period (for this, see Pl. 7–8) [18].

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[16] Questions of this kind are pointless for two reasons: 1. In the conquering philosophy of the leaders of the nomad structures the following elements played a crucial role: the population, the quantity of cattle owned, and the resources (the salt in the case of Transylvanian Basin). At the same time the *territoriality,* as conceptualization of the *"people"* is a Western European feudal political conception (Szűcs 1997, 91–97); 2. The term Transylvania is a geopolitical concept unknown in the ninth century, so this approach is ahistorical.

[17] To this end see: Szűcs 1997, 91–97.

[18] "The topographical position of the cemeteries makes this situation even more unequivocal: these sites are situated on the higher terraces of the Someş River along the Roman roads, which indicates the continuity of infrastructure. From there, they could control the whole Someş valley". Gáll 2013b, 480.

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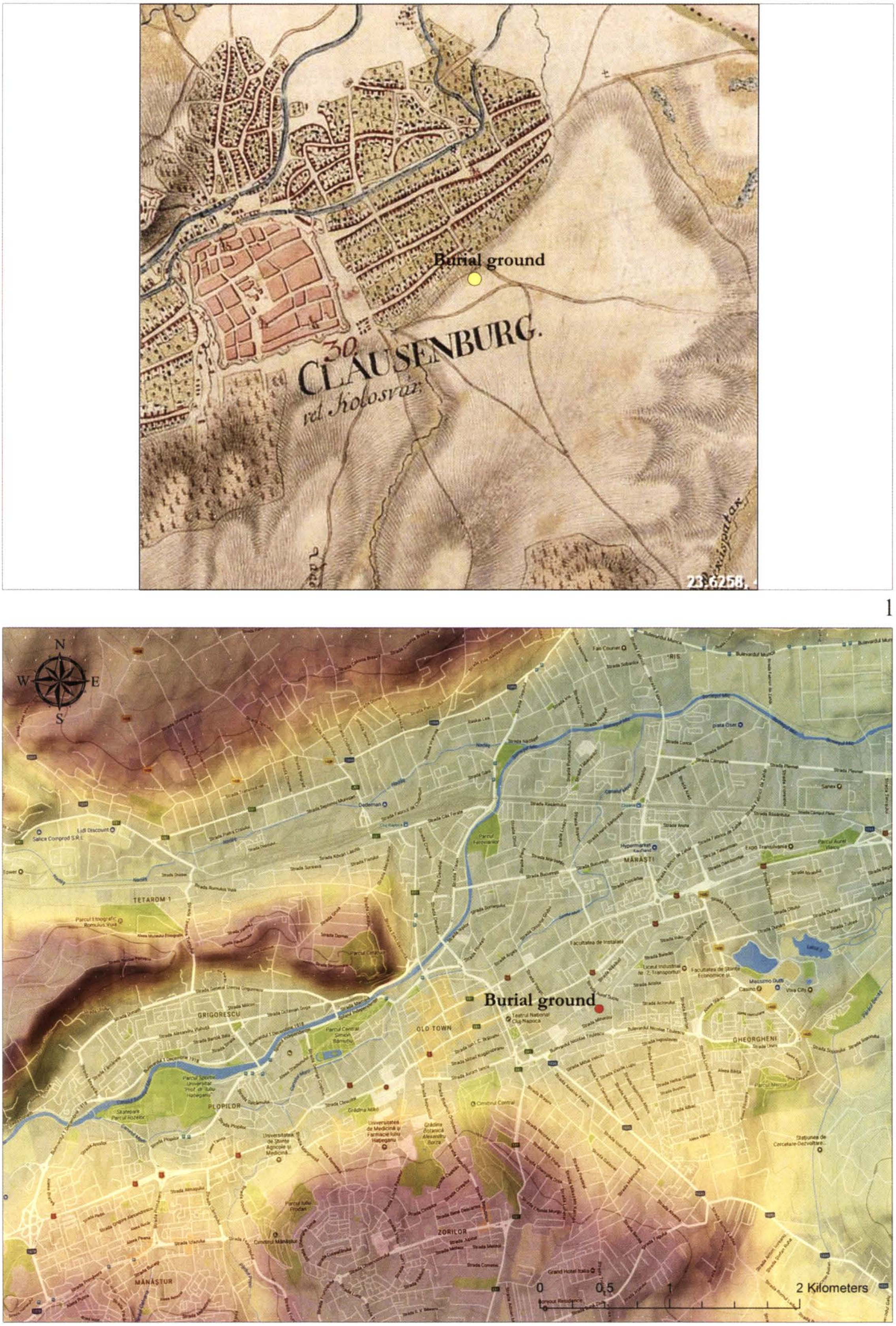

Burial ground
30
CLAUSENBURG.
vel Kolosvár
23.6258,
1
N
W
E
S
Burial ground
GRIGORESCU
OLD TOWN
MĂNĂȘTUR
ZORILOR
GHEORGHENI
PLOPILOR
TETAROM 1
0
0,5
1
2 Kilometers
2

Plate 1. Cluj-Napoca on the first military map; 2.Map of the present-day city of Cluj-Napoca.

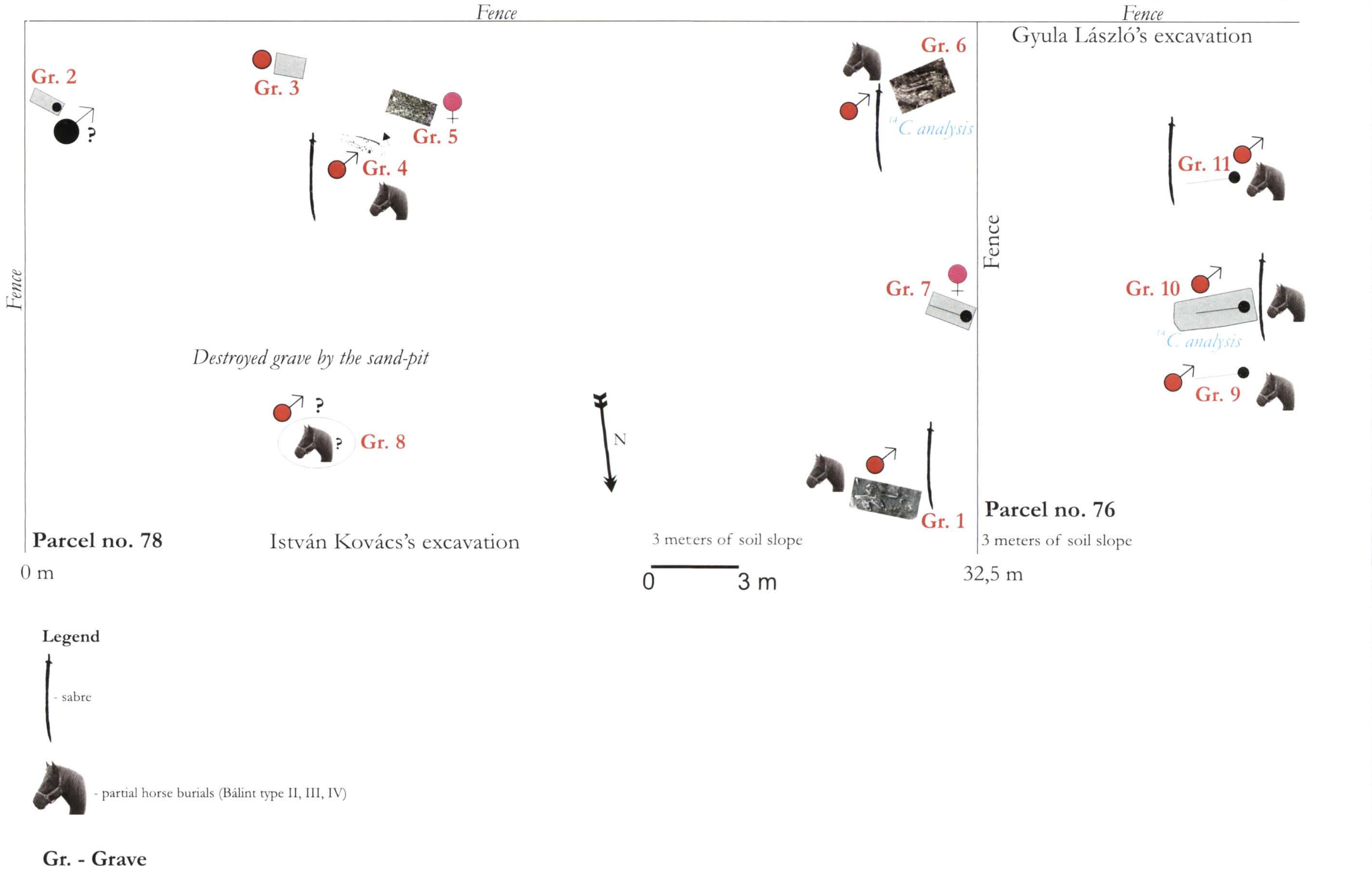

Fence
Fence
Gyula László's excavation
Gr. 2
?
Gr. 3
Gr. 5
Gr. 4
Gr. 6
^{14}C analysis
Gr. 11
Fence
Fence
Gr. 7
Gr. 10
^{14}C analysis
Gr. 9
Destroyed grave by the sand-pit
?
?
Gr. 8
N
Gr. 1
Parcel no. 76
Parcel no. 78
István Kovács's excavation
3 meters of soil slope
3 meters of soil slope
0 m
0
3 m
32,5 m
Legend
- sabre
- partial horse burials (Bálint type II, III, IV)
Gr. - Grave

Plate 2. The funerary spot in Zápolya Street, Cluj-Napoca.

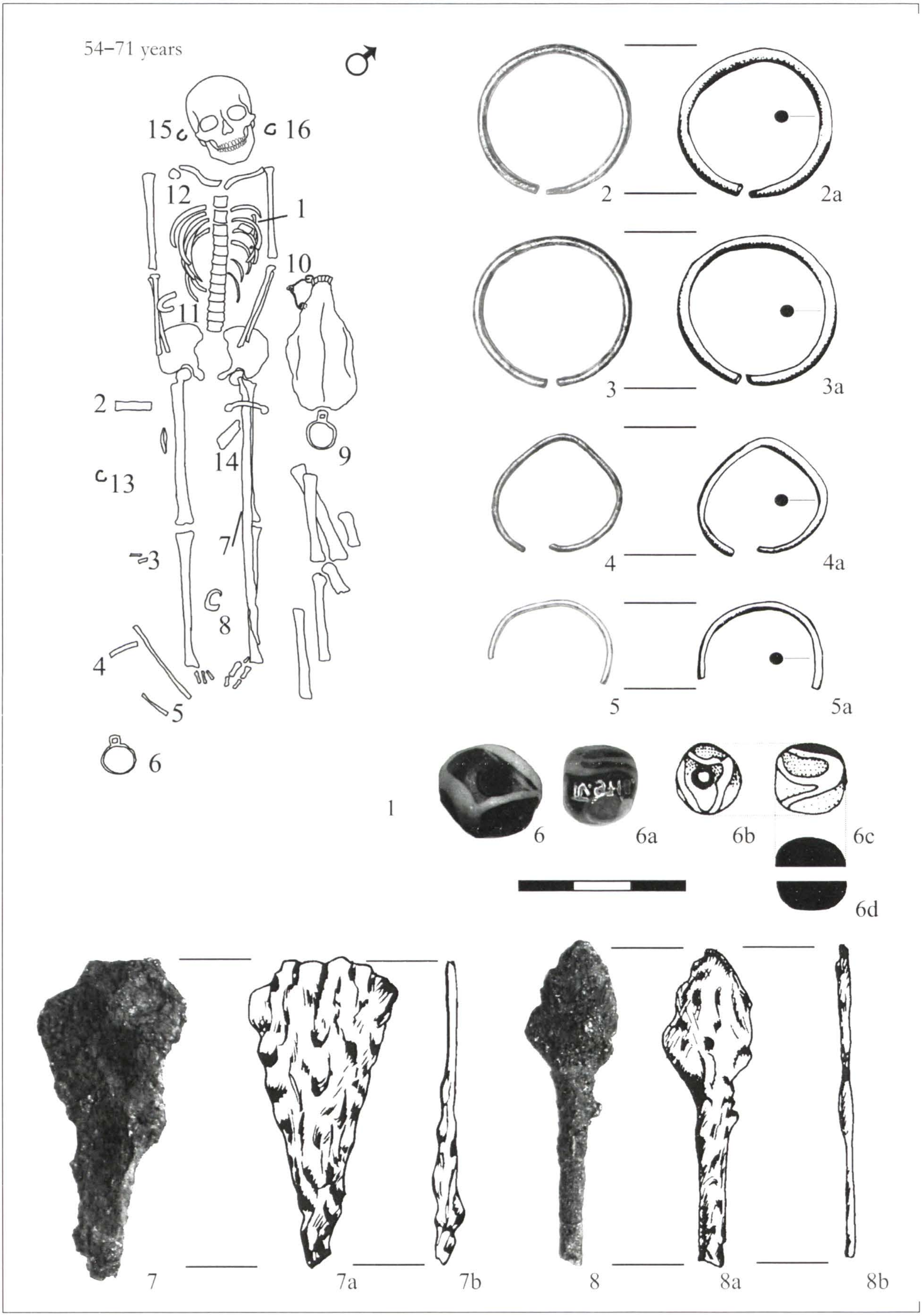

54–71 years
♂
15
16
12
1
10
11
2
9
14
13
7
3
8
4
5
6
2
2a
3
3a
4
4a
5
5a
1
6
6a
6b
6c
6d
7
7a
7b
8
8a
8b

Plate 3. Grave 6.

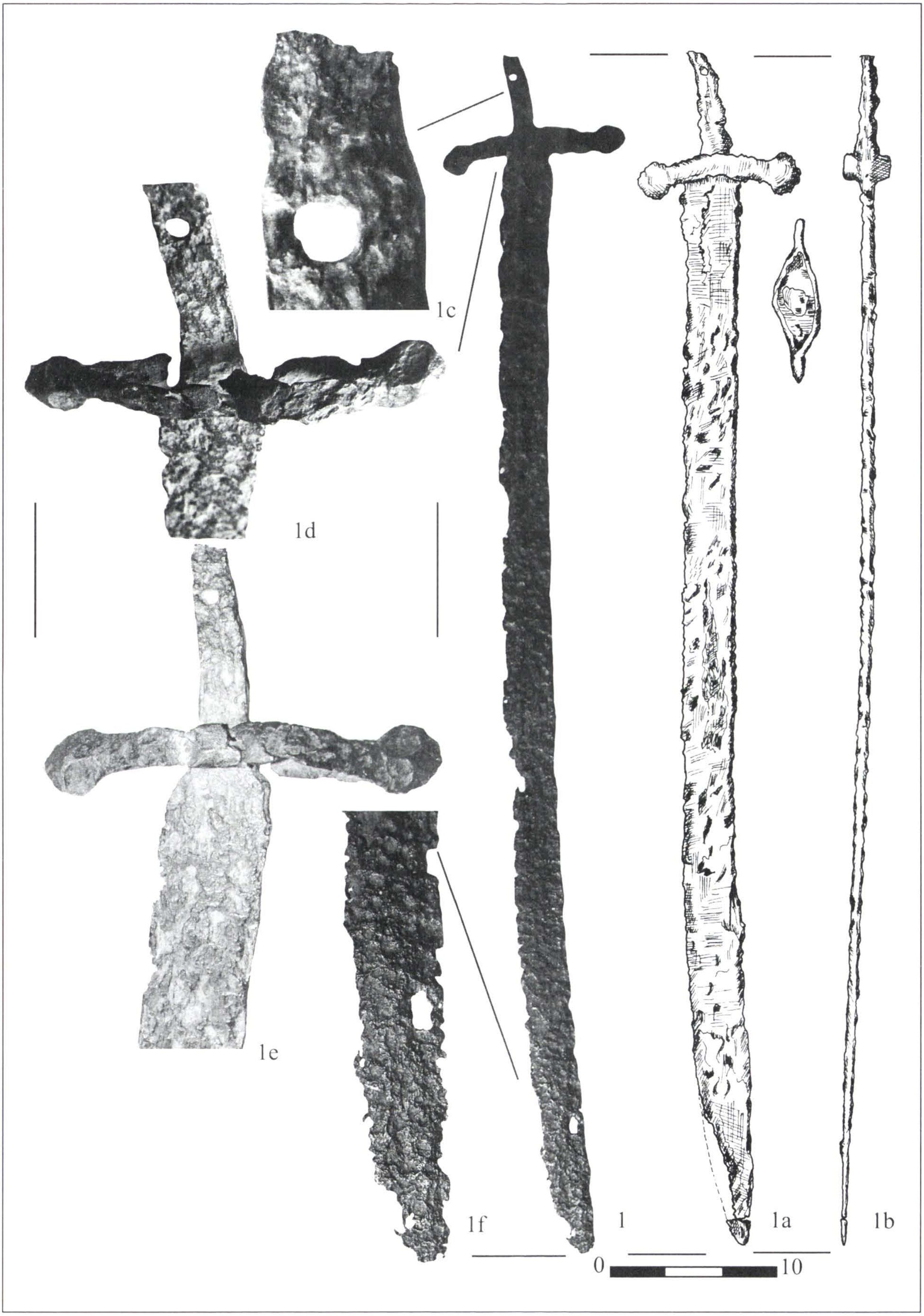

1c
1d
1e
1f
1
1a
1b
0
10

Plate 4. Grave 6.

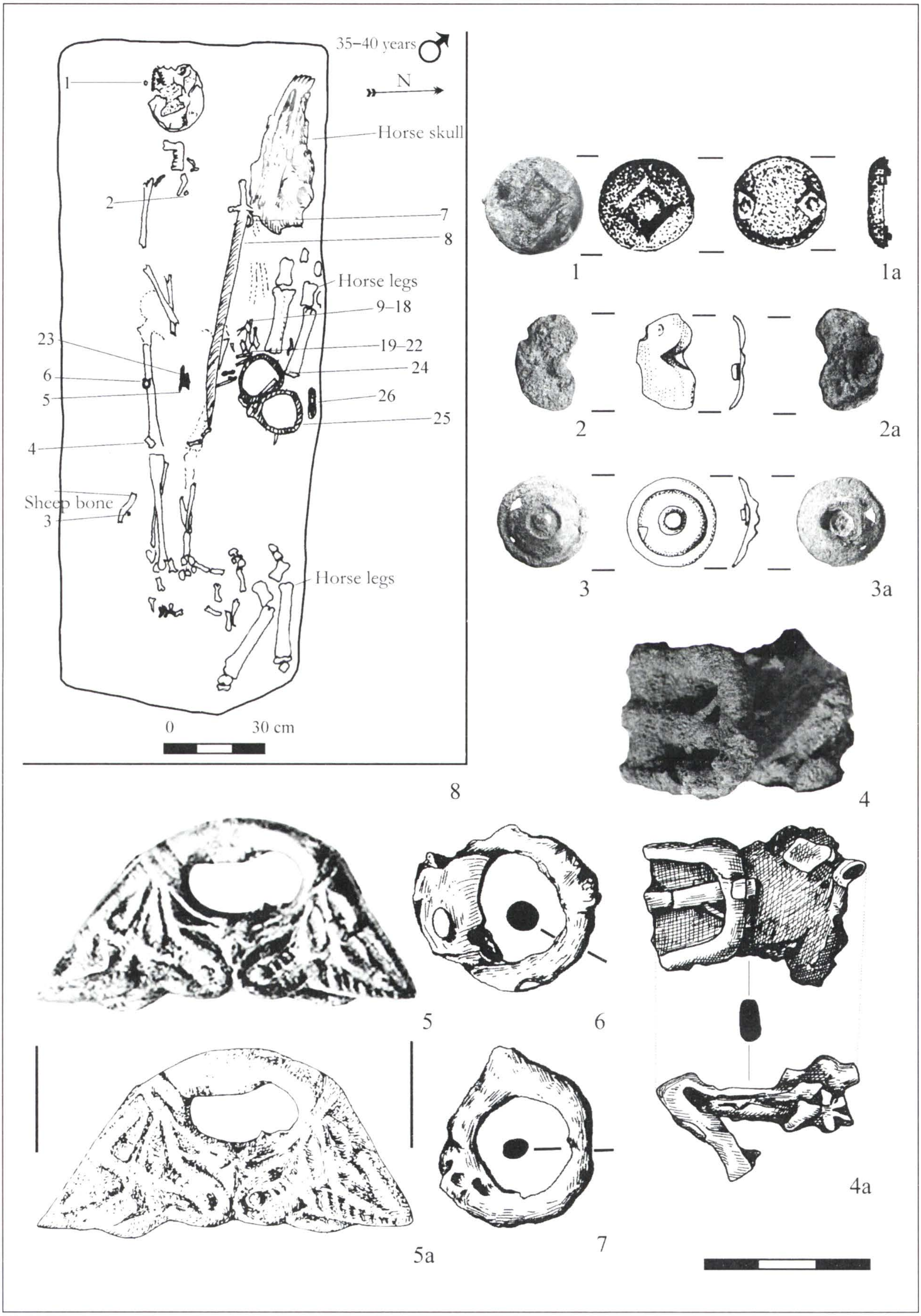

35–40 years ♂
N
1
Horse skull
2
7
8
Horse legs
9–18
23
19–22
6
24
5
26
25
4
Sheep bone
3
Horse legs
0
30 cm
1
1a
2
2a
3
3a
8
4
5
6
4a
5a
7

Plate 5. Grave 10.

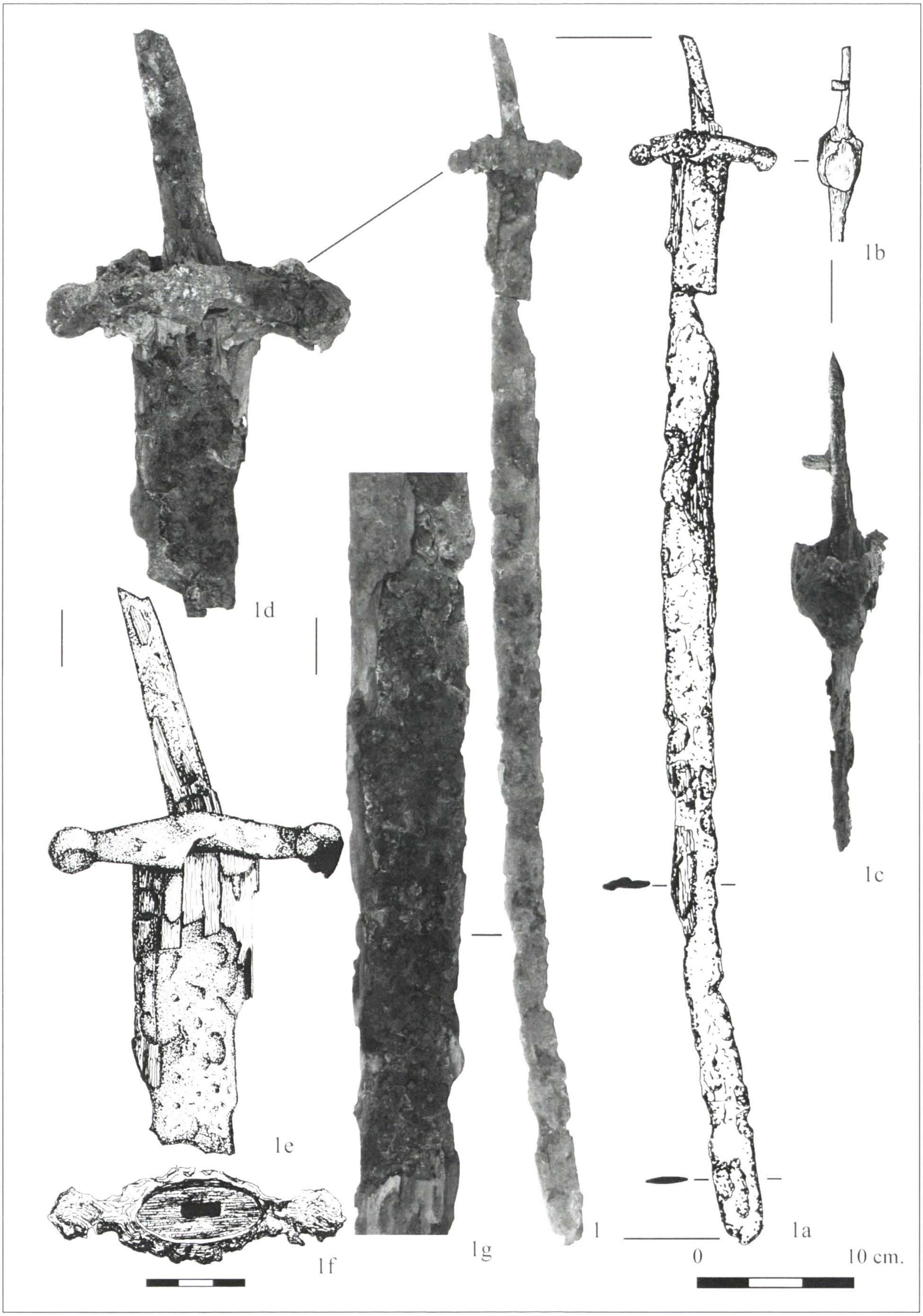

1d
1e
1f
1g
1
1a
1b
1c
0
10 cm.

Plate 6. Grave 10.

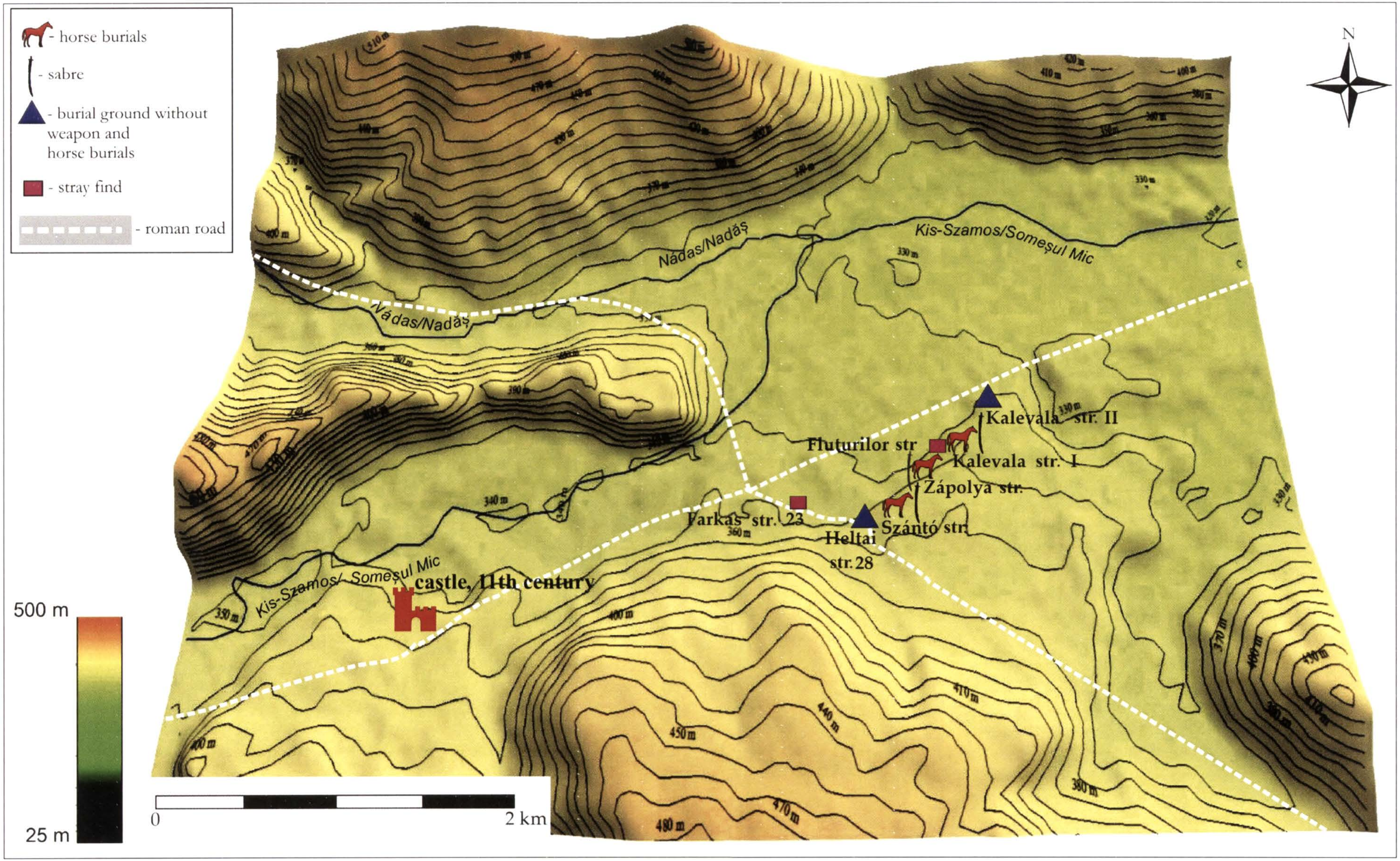
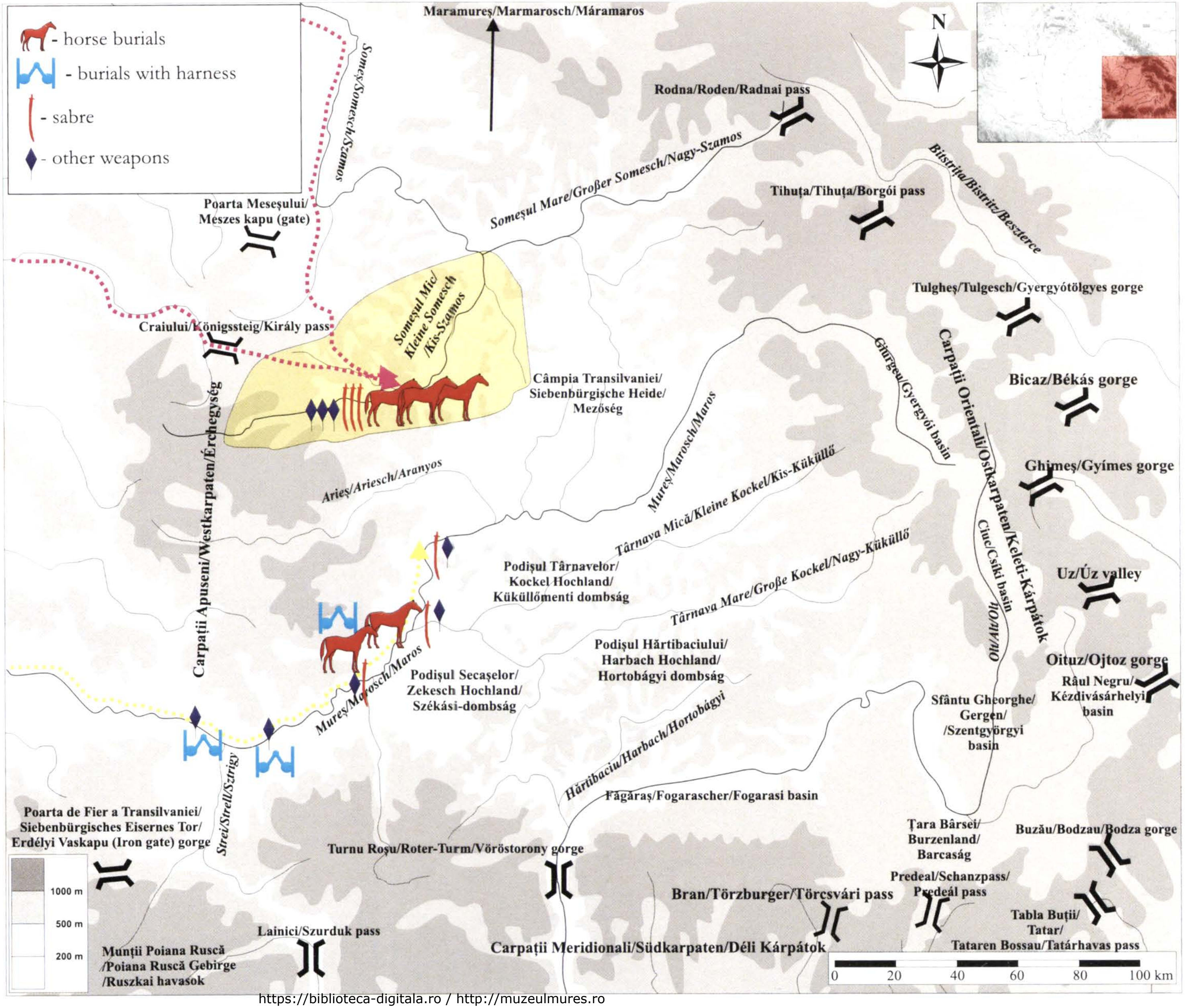

- horse burials
- sabre
- burial ground without weapon and horse burials
- stray find
- roman road
N
Nádas/Nadăș
Kis-Szamos/Someșul Mic
Kalevala str. II
Fluturilor str
Kalevala str. I
Zápolya str.
Farkas str. 23
Szántó str.
Heltai str. 28
castle, 11th century
500 m
25 m
0
2 km
510 m
470 m
440 m
400 m
390 m
380 m
370 m
360 m
350 m
340 m
330 m
410 m
420 m
450 m
480 m

Plate 7. The archaeological discoveries dated to the tenth-eleventh centuries from the territory of the city of Cluj-Napoca and the Roman Road, illustrated in 3D.

Plate 8. The Transylvanian Basin and the possible route of the Magyar conquest.


- horse burials
- burials with harness
- sabre
- other weapons
Maramureș/Marmarosch/Máramaros
N
Rodna/Roden/Radnai pass
Someș/Somesch/Szamos
Someșul Mare/Großer Somesch/Nagy-Szamos
Tihuța/Tihuța/Borgói pass
Bistrița/Bistritz/Beszterce
Poarta Meseșului/
Meszes kapu (gate)
Someșul Mic/
Kleine Somesch
/Kis-Szamos
Craiului/Königssteig/Király pass
Tulgheș/Tulgesch/Gyergyótölgyes gorge
Câmpia Transilvaniei/
Siebenbürgische Heide/
Mezőség
Gurgeu/Gyergyói basin
Carpații Orientali/Ostkarpaten/Keleti-Kárpátok
Bicaz/Békás gorge
Carpații Apuseni/Westkarpaten/Érchegység
Mureș/Marosch/Maros
Arieș/Ariesch/Aranyos
Ghimeș/Gyímes gorge
Târnava Mică/Kleine Kockel/Kis-Küküllő
Ciuc/Csiki basin
Olt/Alt/Olt
Podișul Târnavelor/
Kockel Hochland/
Küküllőmenti dombság
Uz/Úz valley
Târnava Mare/Große Kockel/Nagy-Küküllő
Podișul Hârtibaciului/
Harbach Hochland/
Hortobágyi dombság
Oituz/Ojtoz gorge
Râul Negru/
Kézdivásárhelyi
basin
Podișul Secașelor/
Zekesch Hochland/
Székási-dombság
Sfântu Gheorghe/
Gergen/
/Szentgyörgyi
basin
Mureș/Marosch/Maros
Hârtibaciu/Harbach/Hortobágyi
Strei/Strell/Sztrigy
Făgăraș/Fogarascher/Fogarasi basin
Poarta de Fier a Transilvaniei/
Siebenbürgisches Eisernes Tor/
Erdélyi Vaskapu (Iron gate) gorge
Turnu Roșu/Roter-Turm/Vöröstorony gorge
Țara Bârsei/
Burzenland/
Barcaság
Buzău/Bodzau/Bodza gorge
Predeal/Schanzpass/
Predeál pass
Bran/Törzburger/Törcsvári pass
Tabla Buții/
Tatar/
Tataren Bossau/Tatárhavas pass
1000 m
500 m
200 m
Munții Poiana Ruscă
/Poiana Ruscă Gebirge
/Ruszkai havasok
Lainici/Szurduk pass
Carpații Meridionali/Südkarpaten/Déli Kárpátok
0
20
40
60
80
100 km

Graves with military equipment from the necropolis in Alba-Iulia "Statia de Salvare" (1979–1981), horizon II*

Aurel Dragotă, Mihai Blăjan

Abstract: *The article focuses on the graves of Magyar warriors researched between 1979 and 1981 in the necropolis in Alba Iulia "Stația de Salvare" during town planning works for the extension of the city to the north (excavation of foundations for blocks of flats). These works overlapped the Roman and medieval cemetery located north of the fortification, known from older investigations performed during the 20th century. In those conditions, the team of specialists consisting of M. Blăjan, I. Șerban (National Union Museum in Alba Iulia) and Ștefan Pascu (The Institute of Archaeology and Art History in Cluj-Napoca) managed to identify and safeguard numerous graves and their inventories. Among these graves one can note a group of 13 graves belonging to Magyar warriors (G. 36, G. 54, G. 298, G. 304, G. 322, G. 392, G. 417, G. 517, G. 537 b, G. 584, G. 630, G. 664 and G. 691), described in great detail in the excavation diaries preserved by our colleague Mihai Blăjan in his personal archive.*

On the one hand one can note the fact that the grave pits of a significant part of these graves (G. 36, G. 417, G. 304, G. 517, G. 537 b, G. 664 and G. 691) had been covered and set with lithic material. This tradition (10th–11th centuries) is not specific to the cemetery in Stația de Salvare alone, but can also be encountered in other necropolises in the area of Alba such as those in Pîclișa, "Izvorul Împăratului" and "Str. Brîndușei". An animal offering, in the form of horse bone remains (the skull and limb remains), was found in a single grave (G. 630). The funerary inventories were rather varied, consisting of items of daily use, weapons and weapon accessories, and pottery. The analysis of the elements of funerary rite and ritual support the dating of these graves to the first half of the 10th century and their association with the first Magyar warriors who arrived in the area of Alba Iulia.

The warriors identified in the necropolises from Alba Iulia were part of the military retinue of duke Gylas (who most likely held the position of gyula). This important person from the Magyar staff in Pannonia settled in Transylvania and soon afterwards became a dissident. Furthermore, Gylas identified himself with the autochthonous environment, became the leader of a power center in the area (a "voivodate") and reactivated the Byzantine-origin Christianity that has been a decisive factor in the start of his dissidence.
For these reasons we believe that "Gyla's Voivodate" or "*Terra Gylas" was the fourth independent political entity in the Romania area (besides those led by Menumorut, Glad and Gelu), inside which Romanic, Slavic, Magyar and Byzantine elements coexisted.*

Keywords: *retinue, offering, Alba Iulia, weaponry, Magyars, warriors, Transylvania, Gylas.*

History of Archaeological Researches. In 1904 natural scientist and archaeologist Béla Cserni performed the first archaeological researches on the southern edge of the city of Alba Iulia, on the plot of "Stația de Salvare". The trial excavation he completed in the vicinity of the Alba Iulia-Zlatna road on the exercise ground of the pontoneers (Hidász) has led to the identification of seven inhumation graves, some entirely preserved and some disturbed.

The funerary inventories of these graves consisted of bracelets (3), finger rings (9), earring (2), and one clay pot(decorated with parallel lines, straight and winding) located at the feet of one of the deceased[1]. At that time, one of the two early medieval cemeteries on the territory of the city of Alba Iulia was attributed to pagans (n. n. Stația de Salvare) and the other to the Christianized Magyars (n. n. Termele Romane).

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* The Romanian variant of this article was published in Transylvania magazine/revue, 5–6, 2019, p. 107–124. English translation: Ana Maria Gruia.

Next came the discovery in the area of a trepanned skull (1956) during foundation works for Spitalul Veterinar. The subsequent investigations, performed in 1957 by a team consisting of M. Macrea, D. Protase, and Al. Popa, have led to the discovery of some graves part of the second 3rd century necropolis. The researches performed in 1962 have chanced the identification of five graves with inventories. This funerary area returned to the attention of specialists in 1978, on the occasion of a stray find uncovered during excavations for a pipe on Vînătorilor St. Since 1979–1985 the funerary area north of the fortification was systematically researched due to town planning works, namely the excavation of apartment blocks foundations[2].

The archaeological excavations performed in Alba Iulia "Stația de Salvare" during this period by M. Blăjan, I. Șerban,and Ștefan Pascu have also revealed graves belonging to Magyar warriors, accompanied by funerary inventories: G. 36, G. 54, G. 298, G. 304, G. 322, G. 392, G. 417, G. 517, G. 537 b, G. 584, G. 630, G. 664, and G. 691. Undoubtedly, these warriors' graves were connected to the political center active in Alba Iulia around the year 1000.

Description of the graves:

Grave 36. A row of quarry stones (siliceous limestone), with symmetrical dimensions and different shapes, was uncovered in the northern part of the ditch. The stones, oriented WNW-ESE, were placed one beside the other as a pavement, sometimes overlapped. The feature measured ca. 2.05 × 0.50/0.75 m. The stones were found at depths varying between 16 and 32 cm. The bones of the skeleton were found under the rocks, at the depth of – 75–80 cm. Most of the bones had macerated and only some remained: the broken skull, the humerus bones, the diaphyses of the femurs and of the tibias, and dust spots in the place of the spine and the pelvis. The body had been placed lying on its back, with the head westwards and the feet eastwards. The right arm was extended along the body, while the palm of the left hand had been placed on the abdomen. The even color of the soil did not allow one to identify the contour of the sepulchral pit. The skeleton was that of an adult measuring 1.75 m in height, probably a woman according to the author of the discovery (Pl. 1).

Funerary inventory:

1. Arrowhead with lozenge-shaped blade, strongly oxidized, the tip broken and one of the edges destroyed by corrosion. Only the upper part of the tang has been preserved, the rest broken and lost (h. = 6.23 cm, w. = 2.43 cm, th. = 3 mm; MNUAI F. 6710; Pl. 1/2)/near the right femur.
2. Arrowhead with lozenge-shaped blade, strongly oxidized, with the contour deformed by marginal breaks and the tang broken and lost (h. = 3.6 cm, w. = 2.42 cm, th. = 3 mm; MNUAI 6711; Pl. 1/3)/ near the right femur.
3. Knife blade, with the tang preserved over the length of 12 mm. The blade measures 12.6 mm in width at the base, the spine measures 4 mm in thickness, the cutting edge is affected by rust and displays two concave sections caused by long use. The item is strongly rusted and the blade arched and narrowed towards the cutting edge of the tip (MNUAI 6709; h = 8,.75 cm; Pl. 1/1). The tip is broken / on the left side of the diaphysis of the left femur.
4. Iron firesteel, strongly oxidized, made out of a metal bar (F. 7598; 6.8 × 5 mm) hammered flat in the middle part as a triangle, with the arms arched along the flattened part and the tips curved outwardly (h. = 67.3 mm, w. = 38 mm; Pl. 1/4)/left of the femur.

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[1] Nagy 1913, 272; Horedt 1954, 504; Horedt 1958, 69; G. Fehér *et al.* 1962, 20; Rusu 1979, 58; *Alba Iulia 2000,* 1975, 110. The cemetery has been dated between the end of the 9th century and the subsequent century and attributed to the autochthonous population.

[2] Blăjan, Popa 1983, 376–377; Pascu 1981, 16sq; Ciugudean 1996, 4 and the subsequent pages; Ciugudean 2007, 243sq; Iambor 2005, 182.

5. Temple ring made of silver, round (F. 6411; 18.4 mm; Pl. 1/5), made of 1.5 mm wire, with the ends thinned and left open / on the chest, on the right side.

Grave 54. The contour of the pit is not visible. Depth – 117–120 cm. Pit length: 170 cm × 52/west–32 cm/east. The skeleton belongs to a male adult lying on his back, with the head westwards and the feet eastwards. The bones are poorly preserved, the spine is missing, and the skull cap was broken during excavation. The skull was in situ, with the chin on the chest. The left arm had been extended along the body and the forearm of the right limb was bent at the elbow and placed with the palm on the pelvis. The left branch of the pelvis is broken and the legs are extended almost parallel to each other (Pl. 2).

Funerary inventory:

1. Arrowhead with lozenge-shaped blade and tang (h. = 80.6 mm, w. = 23 mm, th. = 3 mm).
2. Arrowhead with lozenge-shaped blade and tang (h. = 92.6 mm, w. = 22.5 mm, th. = 3.4 mm).
3. Arrowhead with lozenge-shaped blade and tang (h. = 70.2 mm, w. = 21.6 mm, th. = 2 mm).
4. Arrowhead with lozenge-shaped blade and tang (h. = 82 mm, w. = 23.6 mm, th. = 2 mm).
5. Arrowhead with lozenge-shaped blade and tang (h. = 67 mm, w. = 18 mm, th. = 4 mm).

All the arrowheads, deposited in a bundle on the right shoulder (F. 7641–7645/Pl. 2/1–5), are strongly oxidized. Decayed remains of the wooden rod are preserved on the tang. The tang inserted in the rod measures 27.32 mm in length and preserved decayed wooden fibers.

6. The description of the grave also mentions other items from the funerary inventory: a simple bronze earring / discovered by the right ear and two bronze rings identified on the fingers of the right hand. We were unfortunately unable to identify these items in the collections of Muzeul Național al Unirii in Alba Iulia.

Grave 298. Depth = 115 cm. Rectangular pit (210 × 70 cm) with rounded corners. Body lying on the back, with the head to WNW and the feet to ESE (Pl. 3). In a poor state of preservation. The skull cap is entirely preserved, the skull had fallen to the left. The arms extended along the body, with the right palm on the coxal bone. Only fragments of shoulder blades, clavicles, and lumbar and coxal vertebrae have been preserved among the bones of the torso, as the other bones have been destroyed. The femurs extended to form a triangle, the calves parallel to the bones of the feet that had fallen in continuation of the tibias. A small sandstone slab was found near the skull. The skeleton, measuring 154 cm in length, belonged to a senile mature male individual, with long robust bones. The WNW corner of the grave touched the ESE end of G. 299.

Funerary inventory:

1. Arrowhead with lozenge-shaped blade and broken tang (h. = 75.4 mm, w. = 23.6 mm, th. = 3 mm; Pl. 3/3).
2. Arrowhead with lozenge-shaped blade and tang measuring 37.4 mm in length (h. = 11.9 mm, w. = 28 mm, th. = 3.5 mm; Pl. 3/1).
3. Arrowhead with lozenge-shaped blade ending in an angular tip with short neck. The tang measures 39.5 mm in length and is provided in the upper part with a relief shoulder / ring that stops the tip of the shaft (h. = 98 mm, w. = 22.7 mm, th. = 3.4 mm). All of the arrowheads are oxidized, preserving remains of decayed wood on the tang. The shape of the blade of the last arrowhead is different than the others / by the right hand. The arrowheads were found near the right elbow, 10 cm apart from it, and in the right corner of the pit, by the head (MNUAI F. 6702–6704; Pl. 3/2).
4. Oval finger ring (22.6 × 22.4 mm) made of gilded silver, crafted out of a bar widened (5.6 mm) in the upper part through hammering, measuring 1.3 mm in thickness. The ends look like a piece of wire (th. = 2.2 mm) with faceted body. Through right hand side wrapping the wire forms an oval chaton, with parts of the body of the wire filed, consisting of 2–3 spirals. The ends of the free wires are symmetrically wrapped, individually, around the base of the ring, five times. The ring shows traces of wear and tear through long use (dint= 20 × 19 mm, Pl. 3/4) on the right hand.

Grave 304. Depth = 30–80 cm. Layer of Roman brick fragments associated with river rocks, dispersed over an area of 190 × 90 cm. After the removal of the rocks, at – 100 cm, archaeologists noted a trapezoidal pit (210 × 105 cm/WNW- 80 cm/ESE with rounded corners. The body was lying on its back, with the head to WNW and the feet to ESE. The skeleton is in a very precarious state of preservation. The skull has the cap intact and is lying to the left, with the mandible on the left clavicle. The arms had been stretched along the body, the right one slightly bent at the elbow and placed with the palm on the right coxal; the bones of the left palm were missing. The spine and most of the ribs had macerated, and only fragments of the clavicles, shoulder blades, and the upper ribs were preserved. The pelvis and the sacral bone were fragmentary. The legs had been stretched almost parallel to each other and the bones of the feet had collapsed in continuation of the tibia (left) or to the side, on the right. The head had been protected with three sandstone slabs (two placed sideways and one above the top of the head), while the corner of a Roman brick was found on the left side of the left knee. Bone fragments (bovid rib ends?) had been deposited as an offering near the left elbow. The skeleton, measuring 163 cm in length, belongs to a mature male individual with long robust bones, buried with an inventory that is typical for a warrior (Pl. 4). The WNW end overlaps the SE end of G. 534.

Funerary inventory:

1. Oval bracelet (F. 7638; 71.3 × 69 mm) made of a silver (bronze) bar with a thicker middle part (5 × 4.3 mm). The bracelet is oval in section, with thinned ends (3.3 × 2.8 mm and 3.8 × 2.9 mm; Pl. 4/1), open and set apart. The patina is dark green, with light spots.

2. Oval bracelet (F. 7637; 74.8 × 71.9 mm) made of a silver (bronze) bar with a thicker middle part (5.2 mm) and round in transversal section. The extremities are thinned (4 × 3.5 and 3.4 × 3 mm; Pl. 4/2), not closed. The patina is dark green, with light green patches. One of the bracelets is undecorated, but the other displays groups of incised angles on the extremities and on the central support. An item with a similar decoration was also found in G. 388.

3. Bronze finger ring stolen during the researches / on the right hand. The item has not been identified in the collection of Muzeul Național al Unirii in Alba Iulia.

4. Oval finger ring (14.9 × 23.4 mm) made of silver (?) wire that measures 2.6 mm in diameter. Open ends, one made thicker and the other thinned. Dark green patina.

5. Round finger ring (24.8 × 24.6 mm) made of silver with greenish patina, made of 3.1 mm-thick wire, with open ends (MNUAI F. 7611–7612; Pl. 6/36–37).

6. Arrowhead made of iron, with lozenge-shaped blade and tang with traces of wood decay(h. = 103.5 mm, w. = 26.5 mm, th. = 3.7 mm; Pl. 4/8).

7. Arrowhead identical to the first one (h. = 103 mm, w. = 24.7 mm, th. = 3.8 mm; Pl. 5/17), with a stepped transition to the shaft, measuring 33 mm in length.

8. Arrowhead with lozenge-shaped blade and the tip of the tang broken (h. = 69.4 mm, w. = 24.2 mm, th. = 3.8 mm; Pl. 5/12).

9. The semicircular bottom of an iron quiver, fragments from the head hoop provided with holes and nails / on the northern side.

10. Round hoop (22 mm; Pl. 4/6) from bronze bar hat has a flat lower side and an arched upper part, measures 3.8 mm in width and 2.4 mm in thickness and is covered in greenish patina.

11. Strongly oxidized iron hoop (30 × 31 mm; F. 7462?; Pl. 4/4) made of an iron bar that is round in transversal section (4.5 mm), strongly oxidized/ in the end of an iron knife blade placed with the tip westwards.

12. Lyre-shaped bronze buckle, cast, consisting of an oval loop (F. 7461; 16.4 × 10.6 mm) and a rectangular plate with a perforated rectangle (16 × 4 mm); in the lower part the corners of the plate extend to form a rectangle. The oval loop is attached to the rectangle through a neck provided on the inside with a rectangle (9 × 8 mm). The inner surface of the buckle is flat and the outer surface is oval. The prong is missing and the patina is dark greenish in color (h. = 36 mm, w. = 23.5 mm, th. = 2.8 mm; Pl. 4/3).

13. Oval iron hoop (F. 7462; 31 × 29 mm; Pl. 4/5), made of a bar that is round in transversal section (5 mm), strongly oxidized. Inner dimensions: 19 × 21.5 mm/ near the knife.

14. Iron nail with the head hammered as a stripe widened sideways (8.2 mm). The nailis narrowed and has an arched body, pointy towards the tip (h. = 29.8 mm). Tip of a broken nail, measuring 1.4 mm in length and 2.8 mm in thickness. Plate blade, fragmentary, measuring 5.6 mm in width, 1.8 mm in thickness, provided with a widened end (11.3 mm), rounded and perforated in the center. The head of an iron nail is preserved inside the orifice (h. = 28 mm).

15. The remains of a wooden quiver with iron structure consisting of 2–3 thin bars were preserved 20 cm away from the shoulder. Inside the quiver archaeologists found several arrowheads with lozenge-shape blade. The wooden quiver had iron hoops fixed with iron nails to the wood. The body of the quiver was made of wood, though only the iron fixtures and traces of rotten wood have been preserved (Pl. 4/7; 5/9–11, 13–16; 6/22–35). The body of the quiver was semicircular in transversal section and consolidated on the outside with iron fixtures, currently preserved in fragments and strongly corroded. The bottom was plated on the outside with a plate semicircle measuring 129.5 mm in diameter, 75 mm in radius, and 1.7 mm in thickness. The margins of the bottom were wrapped in a plate semicircle bent at a right angle and with the outer margin nailed to the bottom (h. = 9.4 mm, w. = 8 mm, th. = 1 mm). Another iron plate has also been preserved, measuring 1.5 mm in thickness, 39 mm in height, and 60 mm in width, arched in the upper part through inwards bending (sideways) over 9.5 mm in width and curved in shape of a semicircle. The plate, preserved in several pieces, was probably fixed with nails to the upper end, on the arched side. An iron semicircle measuring 22 mm in width and 1 mm in thickness was tightly fixed to the lower third of the quiver, doubled on the outside by another, narrower hoop (13 mm) to which vertical bars for the consolidation of the body were fixed. Some of the bars, 5 mm wide and 3 mm thick, measuring 147 mm in length, have a widened end (11.5 mm) and then narrow down to a triangular tip fixed to the body of the quiver with nails. The opposite widened end becomes narrower, thicker and arches out in the shape of a thickened tip. This lamellar end was also fixed to the quiver with iron nails with a circular end on the outside. Some bars, measuring more than 13 cm in length, probably from the longitudinal corners of the body, have widened ends (12 mm) and the central part narrower (5 mm) and arched sideways in shape of a loop. The arched part was probably the place where the shoulder lanyard was attached. Such bars (2) were placed over the hoops and fixed to the body of the quiver with iron nails located on the ends of the arched loop. A bar end was also preserved, widened, rounded, and perforated, looking like a fixing ear (h. = 32 mm, w. = 12 mm, th. = 1.3 mm). The annex items that plate the bottom of the quiver are fixed with iron nails (29.6 mm) with four-sided body, pyramidal in shape, provided with an oval flower. The nails that fix the plates and the bars to the body are shorter (14 mm).

16–19. Four more iron parts of the quiver have been preserved: nail with oval flower, hammered, four-sided, arched (h. = 3 cm; Pl. V/18); fragment from a plate that doubles the wooden body of the quiver (h. = 20.3 mm, w. = 8 mm, th. = 1.4 mm; Pl. 5/19); tip of a nail measuring 10.5 mm in length (Pl. 5/20); 1/2 iron washer, perforated in the center, concave-convex (d. = 11.4 mm; Pl. 5/21).

M. 392. Depth = 80 cm. Rectangular pit (?) but undefined. Skeleton lying on the back, with the head to the WNW and the feet to the ESE and both arms along the body. In a poor state of preservation. The bones of the torso were found in situ. Some of the ribs, palm bones, spine and the edges of the coxal bones had macerated. The femur bones were placed forming a triangle, the heels slightly apart, while the bones of the feet had fallen sideways, in opposite directions. Measuring 170 cm in length and having long massive bones, the skeleton belonged to a mature male individual (Pl. 1).

Funerary inventory:

1. Arrowhead with lozenge-shaped blade and tang, preserving remains of decayed wood. Strongly oxidized, the arrowhead has an edge fragmented longitudinally and the tip of the tang broken (h. = 57 mm, th. = 3.4 mm; Pl. 1/1)/ near the right knee, with the tip down.

M. 417. Depth = 15–40 cm. The pit, oriented WNW-ESE, is filled with cut or unprocessed stones, river rocks and one brick fragment, placed in two rows. The larger stones are placed at the shorter sides of the pit, while the smaller ones occupy the center. Dimensions of the layer of rocks: 205 × 60 cm. NE of the layer of rocksone could distinguish the contour of a child's grave pit, with a rounded end (G. 434). After the removal of the stones archaeologists found the well-preserved skeleton of an adult-mature individual who had been placed on the back, with the head to ESE and the feet to WNW. The arms had been extended along the body and the bones of the right palm are missing. The fissured skull had fallen to the right. The bones of the torso were relatively well preserved in situ. The right knee was turned to the right, while the left leg was extended in a normal position, with the bones of the feet fallen in continuation of the calf or to the right. The upper part of the left tibia was deformed due to a fracture consolidated through healing. Rectangular pit (225 × 60 cm) with rounded corners. Measuring 176 cm in length, the skeleton belongs to a mature adult male individual (Pl. 2).

Funerary inventory:

1. Arrowhead with lozenge-shaped blade with one broken corner. The tang is short and preserves remains of decayed wood over a height of 23 mm (h. = 68 mm, th. = 2 mm, F. 6708; Pl. 2/ 1)/ by the right knee.

2. Ring fragment 13 Giesler with the bronze wire measuring 10 × 1 mm, with greenish patina / under the head (Pl. 2/2).

G. 517. Depth = 30–70 cm. Layer of massive slabs of calcareous sandstone (200 × 75 cm), placed along the W-E direction. Most of the stone blocks vary in shape and have unprocessed sides. A trapeze-shaped pit (195 × 76 cm/west–75 cm/east) with rounded corners became apparent after the removal of the stones. The skeleton, placed on its back, with the head to the west and the feet to the east, was in a poor state of preservation. The skull, with the broken cap, had fallen to the right. The arms had been extended along the body and only fragments from the diaphyses of the long bones and several phalanges that ended up in the NW corner have been preserved. A few ribs from the right and left sides and several vertebrae from the upper and cervical regions have been preserved from the bones of the torso. The pelvis is represented by macerated fragments. The legs had been stretched parallel to each other and the bones of the feet have only been preserved in the area of the calcaneus and several phalanges. Fragments of bones and phalanges were found scattered in unnatural positions towards the edges of the pit, to the right, to the left, and by the feet. The epiphyses of the long bones had been destroyed (Pl. 7).

Funerary inventory:

1. Iron arrowhead with lozenge-shaped blade, measuring 2.9 cm in width. The tip is broken, the socket preserves wood remains from the shaft (F. 7450?; h = 9.3 cm; Pl. 7/1)/ by the right tibia, with the tip towards the heel.

2. Belt buckle preserved in three fragments (2.9 × 2.3 × 0.3 cm; Pl. 7/2), oblong in shape, made of an iron bar, provided with an iron prong attached to the base of the frame.

3. Fragment from a bronze plate to which one fragment from de frame of the iron buckle was attached (1.9 × 1.6 cm; Pl. 7/4–5).

4. Flint core, brown-coffee brown with iron oxide incrustations that are prism-shaped, provided on all sides with alveoli from chipping (F. 7448; 4.3 × 2.7 × 2.3 cm; Pl. 7/1).

5. Iron firesteel with the body consisting of two arches arms, the center widened in shape of a triangle, with the extremities of the arms arches towards the outside forming circles (F. 7446; 6.9 × 3.5 × 0.5 cm; Pl. 7/10)/between the femur bones.

6. Iron knife blade, rusted, socketed, measuring 2.7 cm in length, with the tip bent towards the blade (F. 7445; Pl. 7/8). The blade measures 1.7 cm in width at the base and becomes narrower towards the tip. It has a convex arched cutting edge and a thickened spine (4 mm). Blade length = 12.7 cm/ near the left humerus, with the tip towards the head.

7. Silver finger ring (F. 7376; 1.67 cm; Pl. 7/6) made of a metal bar measuring 3.1 mm in width and 0.8 mm in thickness, with open ends. The ring was discovered outside the grave, in the soil deposited near the pit, probably originating from G. 300.

8. Silver finger ring (F. 7375; 18, 1 × 18.3 mm; Pl. 7/7) made two braided / twisted wires, measuring 1.3 mm in thickness. The ring is 2.2 mm-thick and had open ends, thinned down through hammering / by the right hand.

9. Round finger ring 13 Giesler (13.2 × 12.6 mm, 0.38 g, F. 6477; Pl. 7/12) made of thin silver wire (0.6 mm), with open ends.

10. Oval finger ring 13 Giesler (13 × 12.5 mm, 0.36 g, F. 6476; Pl. 7/13) made of silver wire measuring 1.6 mm in thickness, with open ends.

11. a.) The lower part of a pot, representing 2/3 from the bottom and body. Fine clayish-sandy fabric, brick-red in color with black core, modelled on the slow-turning potters' wheel. The concave bottom with marginal ring measuring 5.9 mm is provided with a stamp in relief: a rectangle cut by two longitudinal and transversal axes and two diagonals, all passing through the central spot in the middle of the rectangle. The tronconic body, has been partially completed (h. = 48.4 mm, d. f.= 66 mm, th. = 4.8 mm). The bottom is provided with an umbo on the inside (Pl. 7/9).

b.) Fragment from the wall of a cooking pot made of fine fabric, clayish-sandy, brown – brick-red in color with blackish hues, ornamented with stripes of horizontal spiral striations on the body (h. = 55 mm, th. = 5 mm; Pl. 7/11).

The inventory ledger also records the fact that the same graves revealed a knuckle bone game piece (MNUAI F. 7449?).

Grave 537 b. Double grave. Depth = 40–120 cm. Rectangular pit (280 × 100 cm), with the long axis along the W-E direction. Stone blocks, some parallelepiped, other varying in shape, cut and unprocessed, as well as river rocks had been thrown into the filling of the pit in different positions and at various levels. After the rocks were lifted, a rectangular pit (260 × 90 cm) with rounded corners became apparent. The skeleton was lying on its back with the head to the west and the feet to the east and its bones were well preserved. The skull, entirely preserved, was lying on its right side. Both arms were extended along the body, except for the left forearm that had been placed on the left coxal bone. The bones of the torso were in situ. The cervical vertebrae were trashed. The femurs were placed so as to form a triangle, the calves were parallel to the bones of the feet and had fallen in continuation of the tibias and had been disturbed. Measuring 175 cm in length, the skeleton belongs to a mature male individual (Pl. 8).

Funerary inventory:

1. Ceramic pot placed on the left side of the lower third of the left calf, mouth down, slightly tilted to the west. The pot had been modeled on a fast-turning potters' wheel (grooves on the inner walls, wide and concentric) out of clayish-sandy fabric, brown-yellow in color, with sporadic blackish spots on the shoulders and on the margin, with engobe on both surfaces. Concave bottom with marginal ring, 3.6 mm-wide, slender, with almost straight walls, arched in the shoulder area, short neck, obliquely everted rim, beveled and grooved on the inside, with the edge thinned and rounded. On the shoulder it is ornamented with six grooves, 2.8 mm-wide, incised with spirals, overlapped by a stripe consisting of two lines, 1.4 mm-wide, incised with frequent waves, short,

angular (h. = 121.6 mm, d. f.= 84 mm, d.p.= 120.2 mm, d.g.= 101.7 mm, gr. walw. = 6.6 mm, gr. rim= 3.8 mm; MNUAI F. 8896; Pl. 8/1).

2. Arrowhead placed with the tip 10 cm eastwards, left of the lower half of the left femur, with lozenge-shaped blade and iron tang. The tip was strongly oxidized, the head displayed a midrib, the tang was short and the tip broken.

3. The blade of an iron knife was found near the left hip. Only pieces of decayed wood have been preserved from the wooden sheath. The knife blade, deposited tip down, is provided with a tang. The blade's sharp edge is concave towards the base, arched and narrowed towards the tip, with the spine thickened and the tip broken (F. 7456; h = 8 cm, w.tang= 0.5 cm, th..tang= 0.35 cm, w.blade at the base= 1.1 cm, th. = 0.46 cm; Pl. 8/2).

Grave 584. Depth = 80 cm. Pit with undefined contour. The skeleton, lying on its back, with the head to WSW and the feet to ENE, has relatively well preserved bones, slightly scattered. The skull, with the cap broken, was found facing upwards. The arms were extended along the body and the spine was curved to the right, with the lumbar vertebrae disturbed. The femurs, parallel to each other and set apart, were twisted inwards. The upper end of the right calf was displaced to the right and the heel close to its opposite. The feet bones had fallen sideways, but in opposite directions. A rock had been placed in the eastern corner, above the left foot. Measuring 10 cm in length, with robust bones, the skeleton belongs to a mature male (Pl. 3).

Funerary inventory:

1. Arrowhead with lozenge-shaped blade, provided with tang, broken at the end (F. 7576; h = 7.8 cm, w. = 2.55 cm, th.blade= 3 mm, th.tang= 6 mm; Pl. 3/1).

2. Arrowhead (scalpel) with the body of a faceted bar, lozenge-shaped in section, pointy, provided with a socket with rotten wooden remains (F. 7577; h = 11.95 cm, w. = 0.55 cm, gr. blade= 0.5 cm; Pl. 3/2)/between the femur bones.

3. A fragmentary pot was recovered from the area of the left knee. It had been modeled on a slow-turning potters' wheel out of sandy fabric, with a black core visible in the breaking lines and yellowish-brick-red sides. The small pot had an ovoid body, short neck, short rim strongly flared, with the edge flattened diagonally. At the base of the neck it is decorated with a horizontal line and on the shoulder with a stripe of wavy lines, overlapped by a stripe of horizontal striations (Dg/mouth diameter= 11 cm; Pl. 3/5).

4. Oval finger ring (21 × 21.3 mm; Pl. 3/4) made of bronze, wire thickness 1.6 mm, with open ends.

5. Simple silver ring (F. 7490; 15.9 × 15.6 mm; Pl. 3/3), wire thickness1.7 mm, open ends, slightly set apart / by the right ear.

Grave 630. Depth = 85–135 cm. Rectangular pit (225 × 120 cm) with rounded corners. The skeleton, found at – 135 cm was lying on its back, with the head to WNW and the feet to ESE. The preservation state of the bones is very precarious. The skull cap was broken and had macerated, the skull was lying on its right side. The forearms were raised, with the palms towards the shoulders on the chest. The torso bones had entirely macerated, except for the clavicles. The femurs were stretched almost parallel to each other, with the bones of the heels brought together and both feet fallen to the right. The skeleton, measuring 162 cm in length, with the long bones relatively robust, belonged to a mature individual. The skeleton (adult male, 25–30 years) was placed in a coffin made of wooden boards, rectangular in shape (190 × 53 cm). The longitudinal sides display boards placed sideways, marked with a continuous line of coal, 2–3 cm wide, faintly identified in the WNW corner as well. The coffin was a parallelepipedic box (200 × 45 cm) marked also in the ESE corner. A horse's skull had been placed lying on its right side, with the mouth to the NW, in the eastern corner of the ESE end of the pit, above the human bones, at the depth of – 85 cm. The horse's leg bones, with articulate segments, had been thrown in the opposite side (S), one on top of the other, in no apparent order, before the skull. These bone remains were part of the animal offering. The grave was covered with a layer of stone boulders. A horse skull was found at the depth of 85 cm, on top of the human bones, in the south-western end of the pit, lying on the right side in the eastern corner, with the nozzle to NW. The animal's leg bones, with articulated segments, were scattered and overlapped south of the skull. The bone remains (the skull with a few upper incisors and the extremities of the limbs) belong to a horse aged 4 years (Pl. 9).

Funerary inventory:

1. Pot modeled on a slow-turning potters' wheel out of fine sandy fabric, with incomplete reduction firing, blackish-grey core and sides covered in thin blacking-brown engobe, with occasional yellowish-brown spots. The bottom is concave, without a marginal ring, with a stamp in relief in the central part depicting a cross with two arms, one longer and the other shorter. Tronconic body with protruding belly, elevated towards the mouth, short neck and rim obliquely arched outwards, flattened on the inside, with a rounded edge. The decoration starts above the bottom and continues until the base of the neck, consisting of four lines, finely incised, in spiral, placed farther apart in the lower part or close together on the belly, shoulder, and at the base of the neck (h. = 107 mm, d.f.= 68 mm, d. p.= 110 mm, d.g.= 91.6 mm, th. = 4.7 mm; Pl. 9/1)/ tipped over, with the mouth towards the legs, on the upper third of the right femur.

2. Ring made out of a bar of gilded silver, flattened at the base (on the inside), rectangular in section (3.5 × 0.8 mm). The ends are rounded, wire-shaped, and twisted (to the right) so that they form a chaton with four spirals; after that the end of the wire turns seven times around the bar of the ring proper and the other end turns seven times around the opposite part of the bar, placed symmetrically by the opposite end of the chaton(h. = 24.3 mm, w. = 21.7 mm, gr. wire= 1.2 mm, chaton= 10 × 8.8 mm; Pl. 8/25)/placed on the left hand, on the chest.

3. Quiver of which several elements have been preserved: three iron hoops (one entire and two fragmentary), one circle fragment, vertical bars with triangular tips, nails etc., strongly rusted(Pl. 8/22–24; 9/2–21). The body of the quiver had been made of wood, of which only decayed remains have been preserved. The iron hoops had been placed in a row between the femur bones and one iron element was identified in the northern corner of the coffin, near the head.

a. Oval hoop (36 × 33.5 mm) made of an iron bar measuring 3.5 mm in thickness and 4.5 mm in width.

b. Oval hoop(33 × 29 mm), fragmentarily preserved, made of a 4 mm-thick iron bar.

c. Oval hoop(27 × 24 mm), 1/3 of the body preserved, made of an iron bar measuring 4.5 mm in width and 2.8 mm in thickness.

d. Fragment from the bar of a hoop (44 × 33 mm) measuring 1.3 mm in thickness, with the side margins bent inwards, fixed to the body of the quiver with iron nails of which only small fragments have been preserved. The item is strongly corroded.

e. Fragment (1/2) from an iron buckle with an oval frame (21 × 16 mm) made of a bar measuring 5 mm in width and 2 mm in thickness.

f. 6 triangular tips representing the ends of iron bars attached to the body of the quiver with one short nail each.

g. 3 bar fragments, one with an end flattened in shape of a triangle, the other with one end flattened in shape of a lamella and ending in a narrower extremity bent outwards at a right angle. The central part of two of the bars is thinned, arched as an outwards loop, with the ends attached to the body of the quiver with nails. One of the bars overlaps the middle circle of the quiver that is 9 mm wide, 2 mm thick and displays a middle circular groove on the outer side. Remains of a textile with iron oxides have been preserved on one of the bars, where the circle was attached.

h. The preserved nails are short, with circular head, oval, with the tip bent (h. = 15 mm); they had been used to attach the iron fixtures to the body of the quiver. Long nails were also preserved, with the body hammered so that it displays four sides (h. = 28–34 mm). Remains of decayed wood have been preserved on the tips of the nails. The shape of the quiver was identical to the one signaled in G. 304.

Grave 664. Depth = 110 cm. The pit is trapezoidal in shape (220 × 80/SE–85 cm/NW), with slightly rounded corners. The skeleton had been placed on its back, with the head to SE and the feet to NW, in a mediocre state of preservation. The skull, with a crushed cap, had fallen to the left. The arms had been extended along the body, with the palm sunder the coxal bones. The lower half of the spine had macerated. The knees were brought close together, but the bones of the calfs had been scattered. The head had been protected in both corners of the pit with calcareous sandstones: a slab near the left elbow and another in the western corner of the pit. Pieces of coal were found in the filling pit Between – 25 and – 45 cm the pit was covered with 2–3 layers of rocks, varying in dimensions and shape, placed at various levels (Pl. 10).

Funerary inventory:

Three arrowheads (MNUAI F. 7551-F. 7553; Pl. 10/1, 3–4) placed with the tips towards the feet, 6 cm apart from each other, in a row, on the right side of the right femur bone.

1. Arrowhead with lozenge-shaped blade provided with a tang with remains of rotten wood (h. = 8.8 cm, w. = 2.54 cm, th. = 3 mm, h.tang= 3.5 cm).

2. Arrowhead with lozenge-shaped blade provided with a tang, broken and strongly oxidized (h. = 9 cm, lblade= 3 cm).

3. Arrowhead with lozenge-shaped blade, slightly rounded tip and a broken socket that preserves remains of decayed wood (h. = 8.3 cm, w.blade= 2.9 cm, th. = 4 mm).

4. Oval finger ring made of bronze (2 × 2.1 cm; Pl. 10/2), slightly deformed mechanically, made of a widened bar (3 mm) measuring 0.8 mm, made of plate with open ends, one narrowed and the other widened, arched, and perforated. Greenish patina / by the right hand.

5. A cooking pot was found 8 cm from the left heel (MNUAI F. 6581; Pl. 10/5); the mouth of the pot was tilted towards the calves, but the item had been initially placed mouth up. The pot was broken and restored, modeled on the potters' wheel out of fine sandy fabric, blackish-brown in color, with secondary firing. The bottom is concave, with a support ring measuring 0.3cm in width, average-size bitronconic body, wide belly, short neck and strongly flared rim with the edge obliquely flattened and decorated with two horizontal striations. The area between the lower third and the base of the neck is decorated with stripes consisting of 2–3 horizontal striations set apart, overlapped by a row of undulated lines at the base of the neck with short loops, arched tips and the ductus tilted to the left (h. = 10.8 cm, d.f.= 7.2 cm, d.p.= 11.4 cm, d.g.= 9.35 cm).

Grave 691. Depth = 105 cm. Trapezoidal pit (235 × 108 cm/WNW–80 cm/ESE) with rounded corners. The skeleton, placed on its back, with the head to WNW and the feet to ESE, was in a poor state of bone preservation. The skull was broken, pressed, and had fallen to the left. The arms, bent at the elbows, were place with the palms on the coxalbones. Only macerated fragments from the clavicles, shoulder bones and coxal bones have been preserved among the bones of the torso, while the bones of the palms have been destroyed. The legs were extended, with the tibias parallel to each other, the bones of the feet had collapsed, both to the left. Measuring 168 cm in length, the skeleton belonged to an adult-mature male individual. The skeleton was covered with stones placed inside a trapezoidal frame, on the edge of the pit (210 × 100 cm/WNW–70 cm/ESE; Pl. 11), with the central part without stones. When the stones were removed, archaeologists found one ring in each ear and a crushed ceramic pot.

Funerary inventory:

1. Axe (MNUAI F. 7882; 17 × 5.7 cm; Pl. 11/7) with an arched blade, flattened at both ends on a vertical level, especially arched towards the handle. The head displays a strongly flattened poll along a longitudinal line and a narrower part in the lower side, towards the cutting edge. The eye is circular-oval (26 × 28 mm) and preserved decayed fibers from the wooden handle on the inner walls. The outer diameter of the cylindrical edge measures 40 mm, the width of the edge measures

40 mm, the length of the poll measures 5.8 cm in the upper part and 1.8 cm in the lower part, the height of the cutting edge measures 11.1 cm, the width of the cutting edge is 4.5 cm[3]/ with the edge on the lower third of the right femur bone, obliquely tilted, with the cutting edge towards the margin, initially placed with the cutting edge thrust in the soil.

2. Whetstone made of riolithic sandstone, yellow, parallelepipedic in shape, with one flat and one flat-convex side, thinned at the upper end and widened at the opposite end, with the extremities rounded, displaying intense traces of use from the sharpening of metal objects (F. 6441, h = 5.5 cm, w. = 2.2 cm, th. = 1.18 cm; Pl. 11/8). The item is rectangular in transversal section / between the femur bones.

3. Iron knife with the tang set into a wooden handle, preserving decayed remains, slightly curved sideways. The blade is wide at the base, the edge thinner, measuring 4 mm, narrower towards the tip, with thecutting edge displaying a straight line (F. 7610; h = 8.65 cm, w.blade= 1.1 cm; Pl. 11/1)/placed with the tip down in the middle part of the left femur bone.

4. Bronze link (2.44 × 2.37 cm; MNUAI F. 7754?; Pl. 11/2) cast out of a bar that is flat on one side and arched on the other, measuring 3.2 mm in width and 2.2 mm in thickness.

5. Link made of cast bronze, oval (2.5 cm), broken in two fragments, oval in section (2 × 2.5 mm; MNUAI F. 7755?; Pl. 11/3).

6. "Lyre-shaped" buckle (F. 7756; 2.67 × 1.96 cm; Pl. 11/4), cast, with the bar measuring 2.8 mm in thickness, provided with semispherical prominences in the corners of the base and oblique cuts on the margin of the widened frame that supports a fragmented iron prong / by the right coxal bone.

7. Broken pot that has fallen with the mouth to ESE, placed between the hip and the left elbow. The pot had been modeled on a slow-turning potters' wheel out of sandy blackish-brown fabric. On the area of maximum diameter the pot is decorated with parallel linear incisions overlapped by a stripe with wavy lines (h. = 11.4 cm, d.g.= 8.6 cm, d.p.= 9.8 cm, d.f.= 5.6 cm). Storage box G. 691. The profile is that of a jar-pot made out of semi-coarse fabric, decorated with an undulated stripe (two incisions on the shoulders) that overlaps a row of densely traced horizontal lines until under the area of maximum diameter (h. = 118.23 mm; Pl. 11/9).

10. Oval finger ring 13 G (F. 6484; 22.3 × 2.4 mm) made of a silver wire measuring 2 mm in thickness, with open ends, deformed vertically (Pl. 11/6).

11. Oval finger ring 13 G (21 × 20 mm, 1.68 g; F. 6483) made of a silver wire measuring 2 mm in thickness, with open ends / by the left ear (Pl. 11/5).

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Some of the grave pits had been covered and set with lithic material (G. 36, G. 417, G. 304, G. 517, G. 537 b, G. 664 and G. 691), a habit frequent in some of the cemeteries in Alba Iulia, dated to the 10th–11th centuries ("Izvorul Împăratului", "Str. Brîndușei"). In the necropolis from Izvorul Împăratului, this tradition (pseudo-cist, bordering of the grave pit) can also be noted in the case of some graves that belonged to warriors from Gyla's military retinue (G. 115, G. 133, G. 143, G. 168, G. 173, G. 177, G. 184, G. 208, G. 210).

The position of the arms noted in the warriors' graves from "Stația de Salvare" is different: a.) the arms along the body (G. 392, G. 417, G. 517, G. 584); b.) both arms on the pelvis (G. 54, G. 691); c.) the left forearm on the pelvis and the right extended along the body (G. 36); d.) the right forearm on the pelvis and the left extended along the body (G. 298, G. 304); e.) both forearms raised with the palms towards the shoulders, on the chest (G. 630).

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[3] Blăjan 2005, 34, Fig. 115.

The horse offering (skull and limb remains) only featured in a single warrior's grave (G. 630), researched in 1989–1981. The case is not singular though, as there were other cases of animal offerings in warriors' graves identified in the perimeter researched between 1981 and 1985. Another horse offering was identified in a warrior's grave in Izvorul Împăratului (G. 165), but the horse skull had been deposited differently, not facing the human skull but turned away from it; in those conditions this might indicate the abandonment of the Pagan ritual and the adoption of the Christian ritual, in the context in which Gylas' retinue accepted Christianity.

The daily use items found include flints, firesteels (G. 36, G. 517), sharpening stones (G. 691),and knifes (G. 36, G. 517, G. 537 b, G. 691). The funerary inventories of men's graves ("Izvorul Împăratului"/G. 133) and women's graves in Alba Iulia also included sandstone sharpening stones deposited on the left side of the humerus ("Izvorul Împăratului"/G. 197) or in other areas ("Stația de Salvare"/G. 614). Stone sharpening stones feature in a 10th century horizon and in other discoveries such as the one in the necropolis from Deva "Micro 15"/G. 3 (warrior) and in Szabolcs/G. 17[4].

The only bracelets in warriors' graves (shape 4 G) were found in G. 304. One of the items was decorated with >>>> on the ends, a habit also noted in the case of other items from cemeteries in the Carpathian Basin dated to this chronological horizon. At this level, some bracelets were ornamented on the body or on the ends/extremities with transversal incisions/grooves, as one can also note on the items from Malé Kosihy/G. 104 (fem. ad./horizon I)[5], Banatsko Arandjelovo (Oroszlámos)[6], Blandiana B/M. 1[7], Deva "Micro 15"/G. 4 and Vărșand "Movila dintre vii"[8]. They are found both in men's and women's graves, in combination with other shapes such as twisted bracelets and lamellar bracelets with loops.

A novel presence in the funerary inventories of warriors are the two finger rings with chaton (G. 298 and G. 630), that belong to the same variant. In the cemeteries from Alba Iulia, two variants of chaton rings were found, different through the technique in which the upper part/the chaton had been made. Besides the numerous items found in the cemetery from Stația de Salvare/phase II (S. IV/G. 20 (F. 6796), S. V/G. 3 (F. 6798), S. X/G. 24 (F. 8019, 8020),[9] S. XI/G. 28 (F. 8378),[10] S. XIII/G. 52 (F. 9480), S. XXVIII/G. 1, S. XXXIII/M. 9 (F. 7995), S. XLI/G. 13 (F. 9489), G. 30 b, G. 56, G. 288, M. 511, M. 495 (F. 6521), G. 60 and G. 632), one can also mention those identified in Alba Iulia "Str. Brîndușei"/G. 16[11] and G. 33[12] or those fromIzvorul Împăratului (G. 87, 95, 122, 125, 137 and 149).One can find analogies for this shape in Blandiana B[13], Ciacova (Timiș County) /G. 3[14], Soltau, Tiszabercel "Újsor"/G. 21,[15] Szarvas,[16] Gradišteto,[17] Dolný Peter II /G. 7[18] and Vukovar-Lijeva Bara /G. 151, G. 316[19]. The combinations from graves that include this finger ring variant indicate its dating between the second half of the 10th century and the first half of the 11th century.

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[4] Kovács 1994, 22, Fig. 4.

[5] Hanuliak 1994, 106, 122, Pl. XXIII/9.

[6] Țeicu 2009, 137, Pl. 5/4.

[7] Ciugudean, Dragotă 2002, 54, Fig. 131.

[8] Oța 1998–2000, 500, Fig. 9.

[9] Necropolele orașului Alba Iulia 2003, 39, Fig. 126.

[10] Ciugudean 1996, 14, Fig. 48; Ciugudean, Dragotă 2002, 43, Fig. 82; Ciugudean 2006, Fig. 54; Ciugudean 2011, 131.

[11] Dragotă *et al.* 2009, 30, Pl. 18.

[12] Dragotă *et al.* 2009, 34, Pl. 25.

[13] Horedt 1966, 283, Fig. 23/12.

[14] Radu 1972,63, fig. 4.

[15] Istvánovits 2003, 201, Pl. 194.

[16] Krecsmarik 1910, 65sq, Fig. 3/2.

[17] Kapelkova 1989, 48–56.

[18] Dušek 1964, 202, Fig. 3/5;Točik 1968, 21, Pl. XX/13.

[19] Demo 1996, 53sq, 82, Fig. 36; Demo 2009, 160, 280, 528, Fig. 48, Pl. 19/1, 2. type 3. 4 a-b; Demo 2014, 76–77.

Chaton finger rings are frequent finds in women's graves, on the right or left hand, in combination with pottery and shapes 2, 4, 13, 22, 31, 36, 38 b Giesler rings with pentagram, twisted columns, globular knobs and ceramic pots. The maximum number is three items in a single grave. The presence of this variant during the 11th century seems supported by the discovery in Hajdüdorog/G. 1 where it was associated with finger rings 30 and I-II[20]. Most of the items have been discovered in Transylvania, i.e. in the necropolises from Alba Iulia, in a 10th century chronological horizon. It is interesting to note that they were also found in warriors' graves.

Grave 517 has revealed a twisted finger ring made of two wires, prototype of shape 29 G. Up to this point in the present research, twisted rings were dated starting with the 11th century, a fact supported by existing combinations (Arpadian coins, hair rings with one S-shaped end). Lately, a series of associations that we have noted in the cemeteries from Alba Iulia, allow us to lower the dating of these artifacts to a horizon dated to the second half of the tenth century. Thus, to this end we can invoke the items from Alba Iulia "Stația de Salvare"[21] (G. 159) and those from "Izvorul Împăratului"/G. 143 (warrior), G. 150, G. 159, G. 197 and G. 198. A rather more special item is the one discovered in G. 159, made of three twisted wires that frame a thin filigree wire.

Open lamellar finger rings (G. 517, G. 664) are present among the funerary discoveries dated to the ten10th–11th centuries. Analogies for this shapeare known from a series of discoveries, among which we shall mention those from Alba Iulia "Termele Romane"[22], Dvorníky/G. 6[23], Szabolcs/G. 101[24], G. 56[25], Timișoara "Cioreni", Vozokany[26] and Malé Kosihy/G. 141[27], G. 128[28], G. 114[29], G. 65[30], G. 371[31], G. 277[32] and G. 39[33]. On the latter site, lamellar finger rings (shape 45 a) were combined with shapes 4 and 36 Giesler, placed in horizons I-III, dated between the first half of the 10th century and the second half of the subsequent century.

"Lyre-shape" buckles are illustrated by two items found in G. 304 and G. 691. The later items (G. 691) has analogies in Alba Iulia "Izvorul Împăratului" and can be easily included in type A Révész[34]. The trapezoidal iron buckle (G. 517) is similar to the 10th century items from Bánov/G. 17[35] and G. 20[36].

Finger rings 13 G are rather frequent, as they have been identified in several graves: G. 36, G. 54, G. 417, G. 584 and G. 691. For example, some of the warriors buried in the necropolis in Alba Iulia "Izvorul Împăratului" (G. 115, G. 143, G. 144, G. 165 and G. 177) included in their funerary inventory one or two items/grave. With a single exception, (G. 115), when the ring was made out of gold wire that was lozenge-shaped in section (?), the other items had been made of circular/lenticular bronze wire (d=1.14/1.31- 2 cm, gr. wire= 0.10-0.19 cm).

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[20] Nepper, Máthé 1982, 105, Pl. II/3.
[21] *Necropolele orașului Alba Iulia* 2003, 41, Fig. 137–138.
[22] *Necropolele orașului Alba Iulia* 2003, 63, Fig. 238.
[23] Točik 1968, 24, Pl. XV/5.
[24] Kovács 1994, 34, Fig. 7.
[25] Kovács 1994, 28, Fig. 6.
[26] Točik 1968, 62sq, Pl. LIV/7, 10.
[27] Hanuliak 1994, 107, Pl. XXXIII/A 1–2.
[28] Hanuliak 1994, 107, Pl. XXIX/C–2.
[29] Hanuliak 1994, 106, Pl. XXV/D–3.
[30] Hanuliak 1994, 105, Pl. XII/E–1.
[31] Hanuliak 1994, 134, Pl. LXXIX/A–1.
[32] Hanuliak 1994, 110, Pl. LVII/A –3.
[33] Hanuliak 1994, 104, Pl. VII/A –6.
[34] Révész 1987, 257–285.
[35] Točik 1968, 12, Pl. III/17.
[36] Točik 1968, 12, Pl. IV/17.

The circular loops found in G. 304, G. 630 and G. 691 are weapons accessories, with analogies on this chronological horizon in the Magyar cemeteries from Hungary and Slovakia. In our area, similar items can be found in the warriors' graves from "Izvorul Împăratului"/G. 143, G. 165 and Nădlac "Lutărie"/G. 01[37].

Axes like the one found in "Staţia de Salvare"/G. 691 are encountered in 10th century horizons in Gîmbaş "Măguricea"/G. 3[38], Dudeştii Vechi „Movila lui Dragomir"/G. IV,[39] Pécs-Somogy[40], Kecskemét[41], Kiskunfélegyháza "Radnóti Miklós utca"[42], Székesfehérvár "Demkóhegy"/G. 6[43], Tiszaeszlár "Sinkahegyi"[44], Majs/G. 844,[45] Tiszabercel "Ráctemető"/G. 10[46] and Püspökladány "Eperjesvölgy"/G. 205[47]. This variant (III A Ruttkay, VIII A Kirpičnikov, VI C Kovács) with origins in the Eastern areas[48], measures between 10.2 cm and 15.5 cm in length, with the blade measuring 3.2 – 5.4 cm in width. Parallels from the area of Kievan Russia allow one to date the item from Alba Iulia before the middle of the 10th century.

Quivers are represented by the fitting remains identified in G. 304 and G. 630. Quiver remains have also been identified in other warriors' graves in Alba Iulia "Staţia de Salvare", researched in 1981–1985. Such fittings were also identified in other necropolises from Hungary, south-western Slovakia and the Romanian area, among which one can mention Orăștie "Dealul Pemilor X2"/G. 59 (on the right side of the pelvis and hip)[49], Timișoara "Cioreni", Vărșand "Movila dintre vii", "Voiteni", Alba Iulia "Izvorul Împăratului"/G. 115, G. 143, G. 219, etc[50].

Arrowheads are more frequently found than other weapons. They are illustrated by the items in G. 36, G. 54 (in a bunch by the right shoulder), G. 298, G. 304, G. 392, G. 417, G. 517, G. 584 and G. 664. The deposition of arrows in bunches, but in different anatomical areas, has also been noted in warriors' graves from Izvorul Împăratului: in the area of the left forearm, with the tips towards the upper part of the body (G. 177); by the left shoulder (G. 173); in the upper third of the left femur bone (G. 144) [51]. This habit was also noted in other necropolises from the Romanian area, researched in Vărșand "Movila dintre vii"/G. 33[52] and Orăștie "Dealul Pemilor X2"/G. 14.[53] Except for a few special shapes, found in G. 298 (Pl. 3/2) and G. 584 (Pl. 3/2), most of the arrows can be included in Ruttkay type VI and group B/ variants 1 a-c and 2 a, dated between the 10th and the 12th centuries[54].

The place of deposition of the ceramic pots was different: a.) between the hip and the left elbow (G. 691); b.) near the left heel (G. 664); c.) on the upper third of the right femur (G. 630); d.) outside of the left calf (G. 537 b, G. 584). Stamps only featured on the bottom of the offering pots from G. 630 and G. 537 b. The decoration consisted of an undulated incised stripe on the shoulder, overlapping horizontal lines placed in close succession (G. 584, G. 691, G. 664, G. 537 b); horizontal lines at frequent intervals (G. 517) traced from the shoulder to the lower part (G. 630). With a single exception (12.1 cm), most of these pots measured between 10.7 cm and 11.4 cm in height; in fact, this is one of the specific traits of 10th century pottery from Alba Iulia. The distance between the graves was of maximum 10 m (between G. 691 and G. 664, G. 54 and G. 417 and G. 36 and G. 392). A certain group, with a distance of maximum 5 m between the graves, can be noted in the case of graves G. 298, G. 304, G. 517, G. 537 b and G. 630. Except for G. 322 and G. 584, all of the warriors' graves have been identified on the ground plan of the cemetery (Pl. 12–13).

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[37] Mărginean, Huszarik 2007, 19, Pl. XI/6.

[38] Dragotă *et al.* 2010, 66, Pl. II/19.

[39] Bejan *et al.* 2005, 28, Fig. 4/2.

[40] Dombay 1961, 80, Fig. 7.

[41] Hampel 1905, 636, Pl. 422/10.

[42] Fodor 1996, 333, Fig. 2.

[43] Hampel 1905, 580sq, Pl. 393/4 a-b; Vaňa 1954, Pl. VIII/2; Fehér *et al.* 1962, 70; Kiss1966, 47, Fig. 2/5–5 a.

[44] Jósa 1914, Fig. II.

[45] Kiss 1983, 133, Fig. 78.

[46] Istvánovits 2003, 193, 338, Pl. 182, Fig. 171/3.

[47] Fodor 1996, 252, Fig. 21; Nepper 2002, 219, Pl. 183/9.

[48] Kovács1980/81,249; Aleškovskij1960, Pl. 2/16–17; Kirpičnikov 1986, Pl. X/25.

[49] Pinter *et al.* 2006, 246sq.

[50] Dragotă 2018, 71sq.

[51] Dragotă, Blăjan 2018, 287.

[52] Popescu 1956, 92, Fig. 84/1.

[53] Ţiplic, Pinter 2007,155.

[54] Ruttkay 1976, 327–333, Fig. 54; Ruttkay1982, 177, T. II.

Compared to the warriors' graves researched in 1981–1985 by the team that included Horia Ciugudean, one notes here the absence of bone plaques from bows. Undoubtedly this is a different chronological level, a fact also supported by the shape of the battle axe, present in discoveries dated to the first half of the 10th century.

All elements of funerary rite and ritual (the anatomical position where the offering pots had been deposited, the position of the arms, the animal offering and its position) indicate that these graves should be dated to the first half of the 10th century. What is more, another argument supporting this opinion consists of the absence of bird/egg offerings that only appeared towards the middle of the 10th century, during the transition period between Paganism and Christianity. From this perspective, we choose to correlate these graves with the first Magyar warriors who arrived in the area of Alba Iulia during the first decades of the 10th century. They were part of the military escort of duke Gylas, an important person in the *Magyar staff* from Pannonia, who settled in Transylvania and identified with the environment of the autochthonous population. Gylas[55] shortly became a dissident and founded a "voivodate" in the area, reactivating the Byzantine-origin Christianity. *The idea that Hierotheus also exerted his authority over the Magyars in Pannonia is out of the question, even more so since religious motifs marked the beginning of Gyla's dissidence (sic!).* Thus, "*Gyla's Voivodate*" or "*Terra Gylas*" was the fourth independent political entity from the Romanian area (Menumorut, Glad and Gelu), where Romanic, Slavic, Magyar and Byzantine elements coexisted.

We believe that the use of the term "The Voivodate of Alba" for the 9th century is forced and lacks scientific support, even from an autochthonous and a Bulgarian perspective. On the other hand, the term "The Voivodate of Alba Iulia" would only be appropriate alongside terms such as "The Voivodate of Dăbâca", "The Voivodate of Biharia" etc. Why, in the case of the first terms, the "*voievodate*" is identified with the name of the leader and in the case of the entity from Alba in the best of cases only with the toponym? *We are bothered by the fact that a leader from the staff (most likely the bearer of the dignity of gyula) managed the situation in Transylvania on the level of this chronological horizon from a political, military and religious perspective. Except for this "episode", the number of warriors' graves from Alba Iulia (sic!), especially, but also those from Transylvania in general, prove beyond doubt that the Magyars did not rule, nor did they conquer this geographic area in the second half of the 10th century. What happened de facto after 1003 represents another historical story entirely!*

Beyond the content of the legend, Gylas became the leader of the power center from Bălgrad and the artisan of Christianization along the Byzantine line, as proven by the archaeological evidence as well. K. Horedt (1954) admitted the existence of a voivodate in the area of Alba ever since the middle of the 9th century, represented by the two fortified settlements in the Mureş Valley (Bălgrad, Ţeligrad), under the Bulgarian sphere of influence. According to Ştefan Pascu, certain geographic elements provided further protection for this "voivodate": the Gurghiu/Harghita range of volcanic mountains (the eastern border), "Ţara Haţegului" (the western border), River Olt down to "Ţara Făgăraşului" (the southern border) and the eastern edge of the Apuseni Mountains

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[55] Popa-Lisseanu 2010, cap. XXIV, XXVII, 129sq, 132sq; Pop 1998, 52sq; Nägler 1997, 34; Anghel 1975, 23sq.

(the northern border)[56]. From my perspective, the extent of this "voivodate" was much smaller than academy member Ştefan Pascu estimated. Nevertheless, Gylas was the representative of a "voivodate" or power center that is today an undoubtable historical reality! One can find more or less lacunal pieces of information / mentions on the fate of this "duchy" or "voivodate" and implicitly of its leader Gylas in various works published in Romania or abroad after 1989[57].

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[56] Horedt 1954, 494.

[57] Bulei 2004, 30sq; Lendvai 2001, 38sq; Obolensky 2002, 175sq; Spinei 1999, 77; Engel 2006, 55; *Istoria Transilvaniei* 2003, 210.

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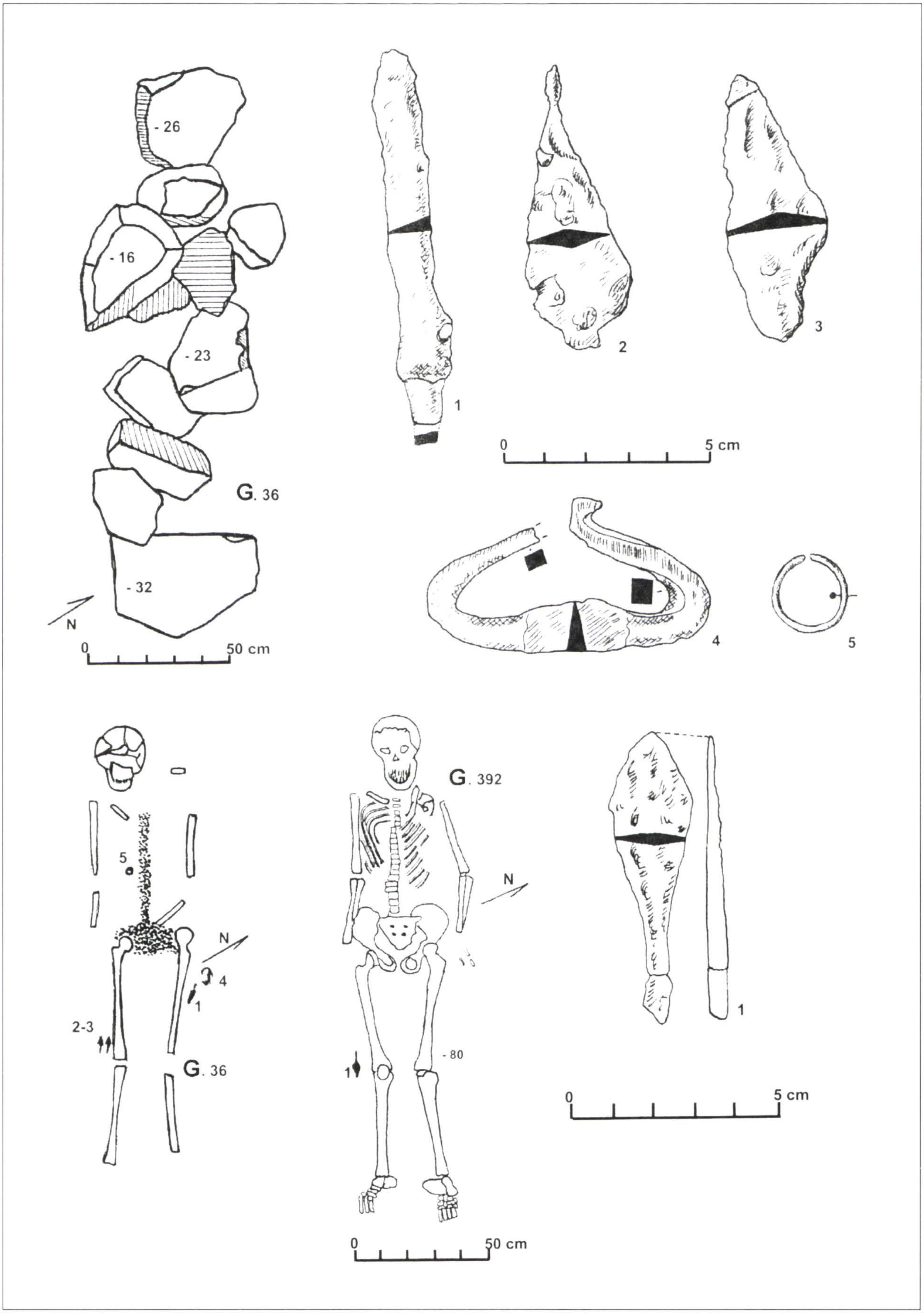
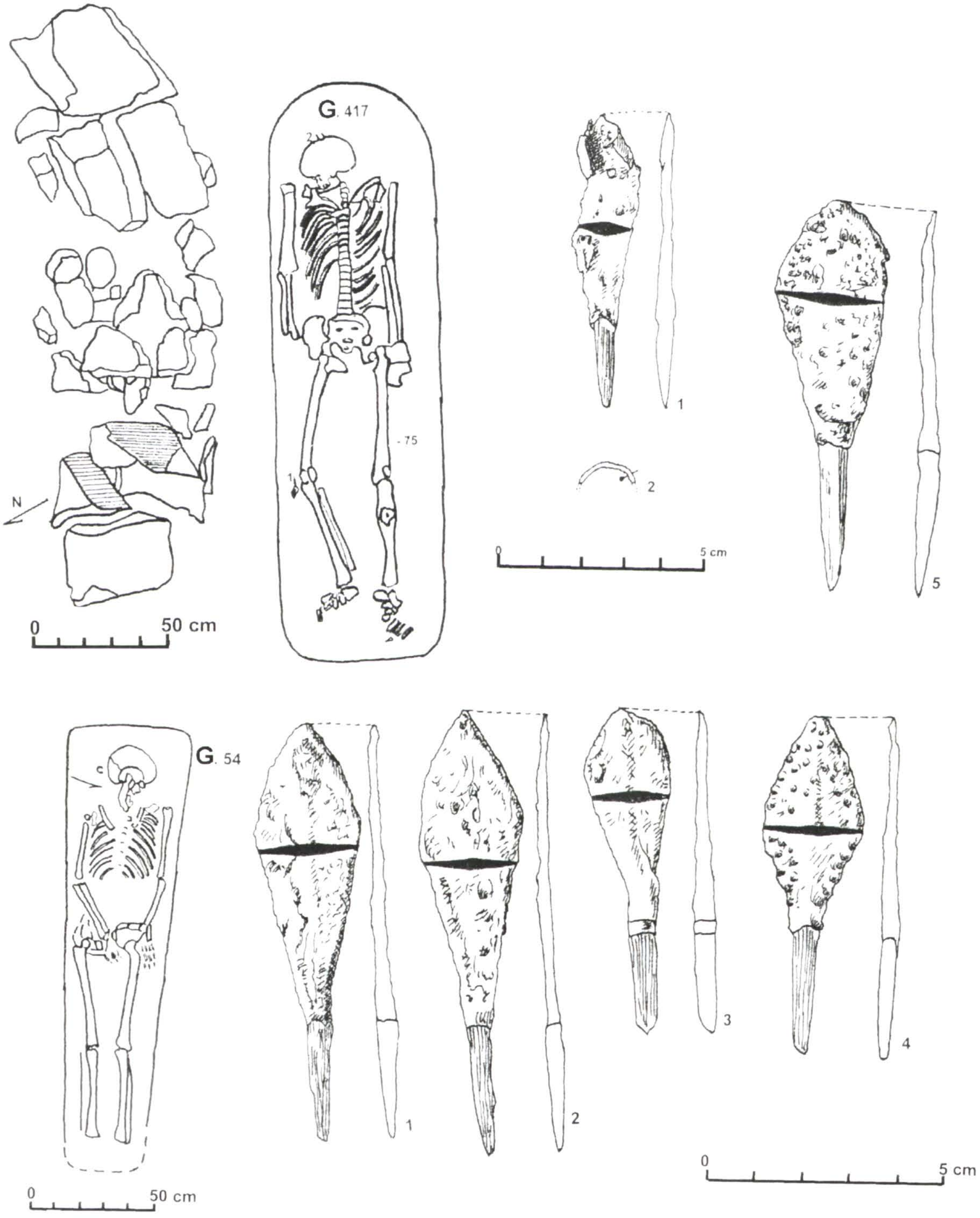
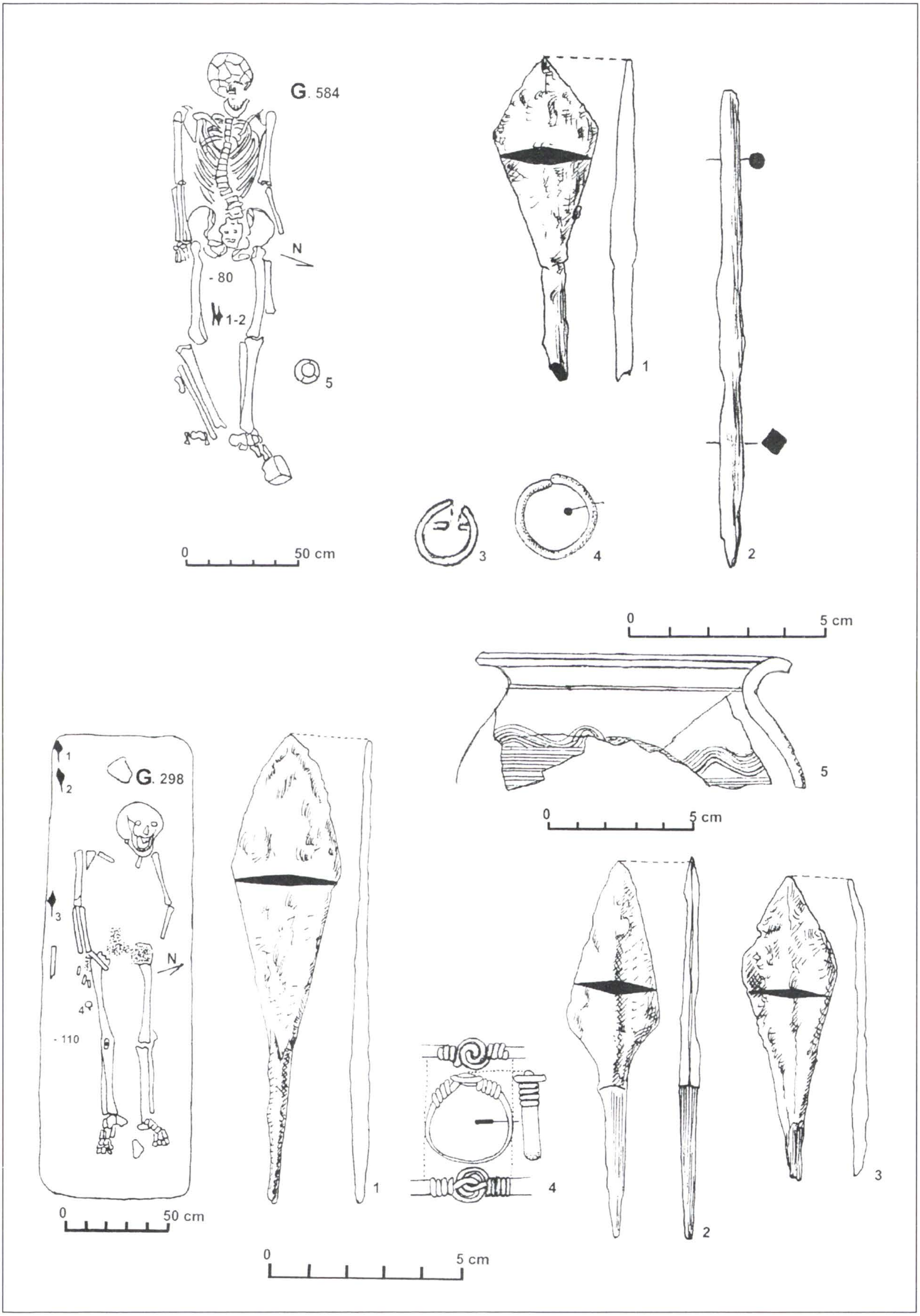

- 26
- 16
- 23
- 32
G. 36
N
0
50 cm
1
2
3
0
5 cm
4
5
G. 392
N
5
N
4
1
2-3
G. 36
1
- 80
0
50 cm
1
0
5 cm

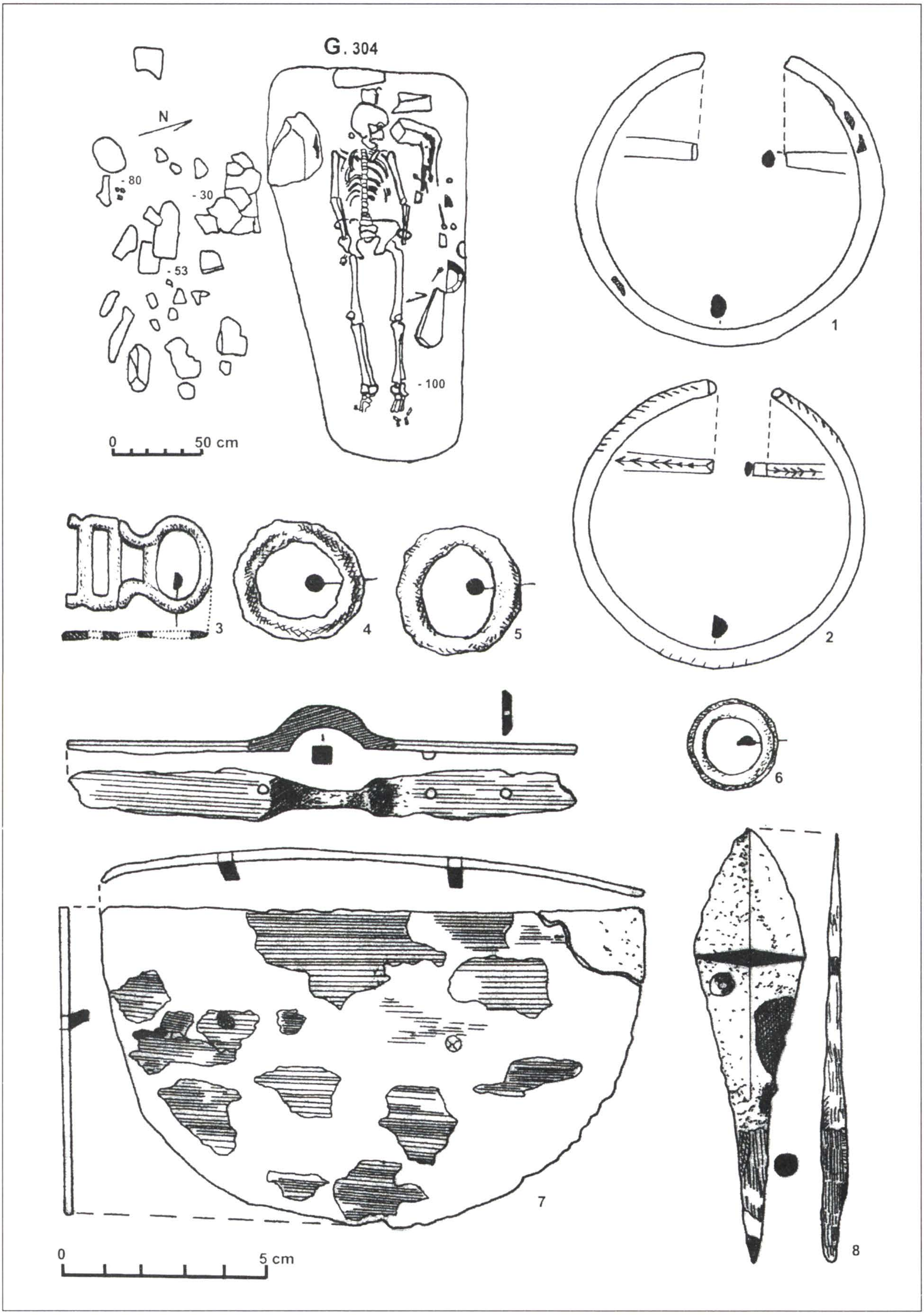
Pl. 1. 1-5. G. 36 with the funerary inventory (drawings: M. Blăjan);
1. G. 392 with the funerary inventory (drawings: M. Blăjan).


G. 417
2
1
- 75
N
0
50 cm
1
2
0
5 cm
5
G. 54
c
0
50 cm
1
2
3
4
0
5 cm

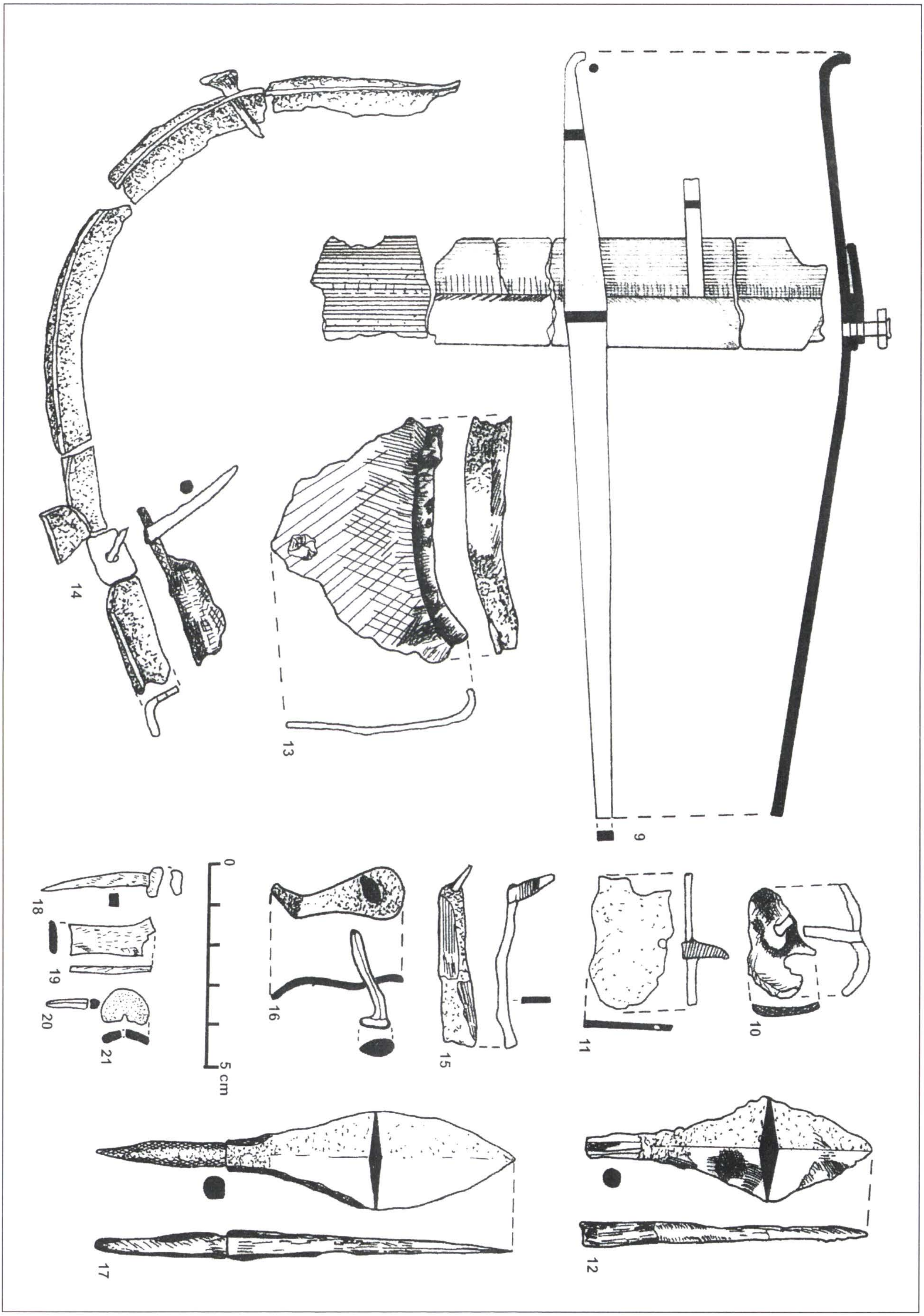
Pl. 2. 1-2. G. 417 with the funerary inventory (drawings: M. Blăjan);
1-5. G. 54 with the funerary inventory (drawings: M. Blăjan).


G. 584
N
- 80
1-2
5
0
50 cm
1
2
3
4
0
5 cm
5
0
5 cm
G. 298
1
2
3
4
- 110
N
0
50 cm
1
4
2
3
0
5 cm

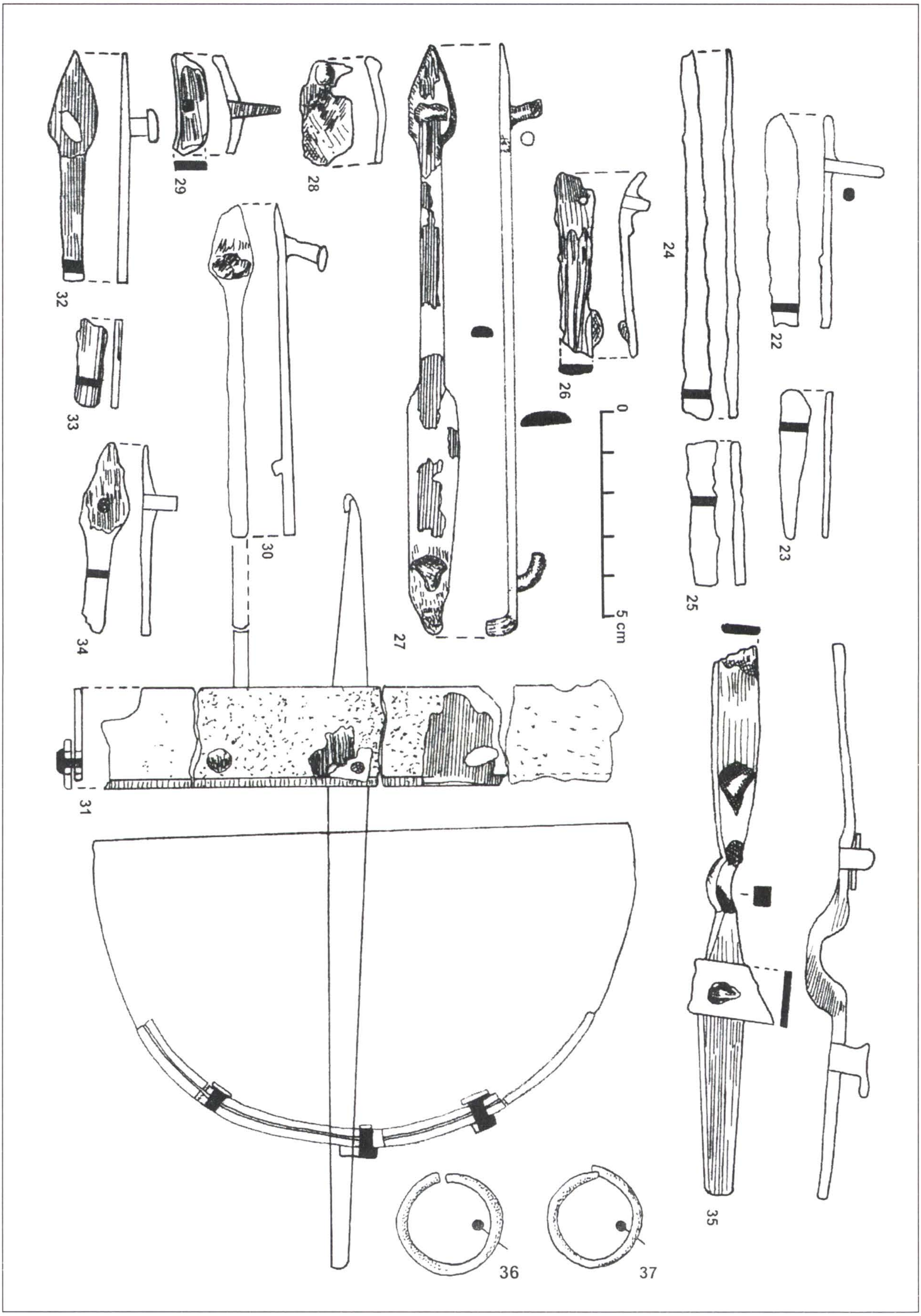
Pl. 3. 1-5. G. 584 with the funerary inventory (drawings: M. Blăjan);
1-4. G. 298 with the funerary inventory (drawings: M. Blăjan).


G. 304
N
- 80
- 30
- 53
- 100
0
50 cm
1
2
3
4
5
6
7
8
0
5 cm

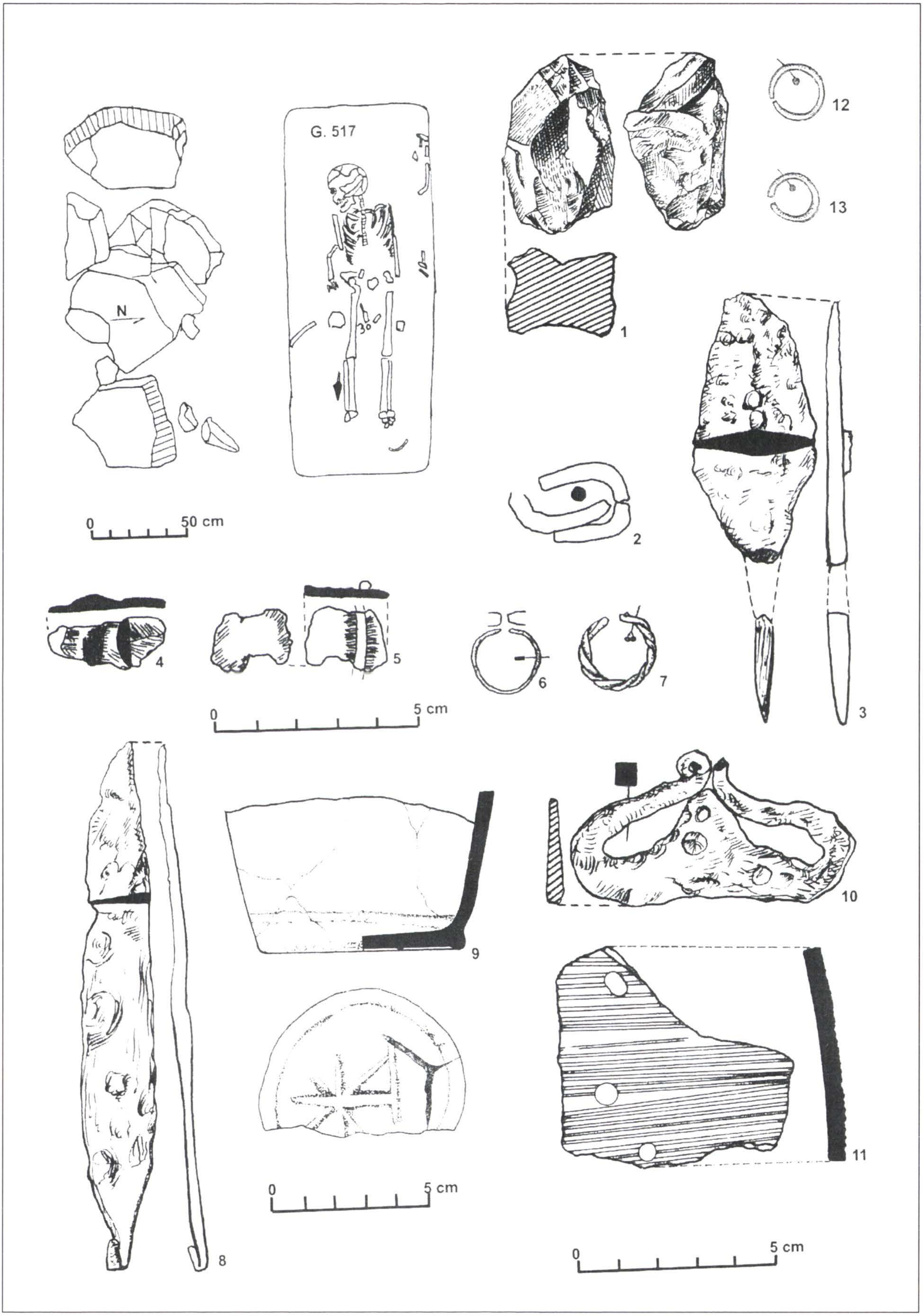
Pl. 4. 1-8. G. 304 with the funerary inventory (drawings: M. Blăjan).


14
13
9
18
19
20
21
0
5 cm
16
15
11
10
17
12

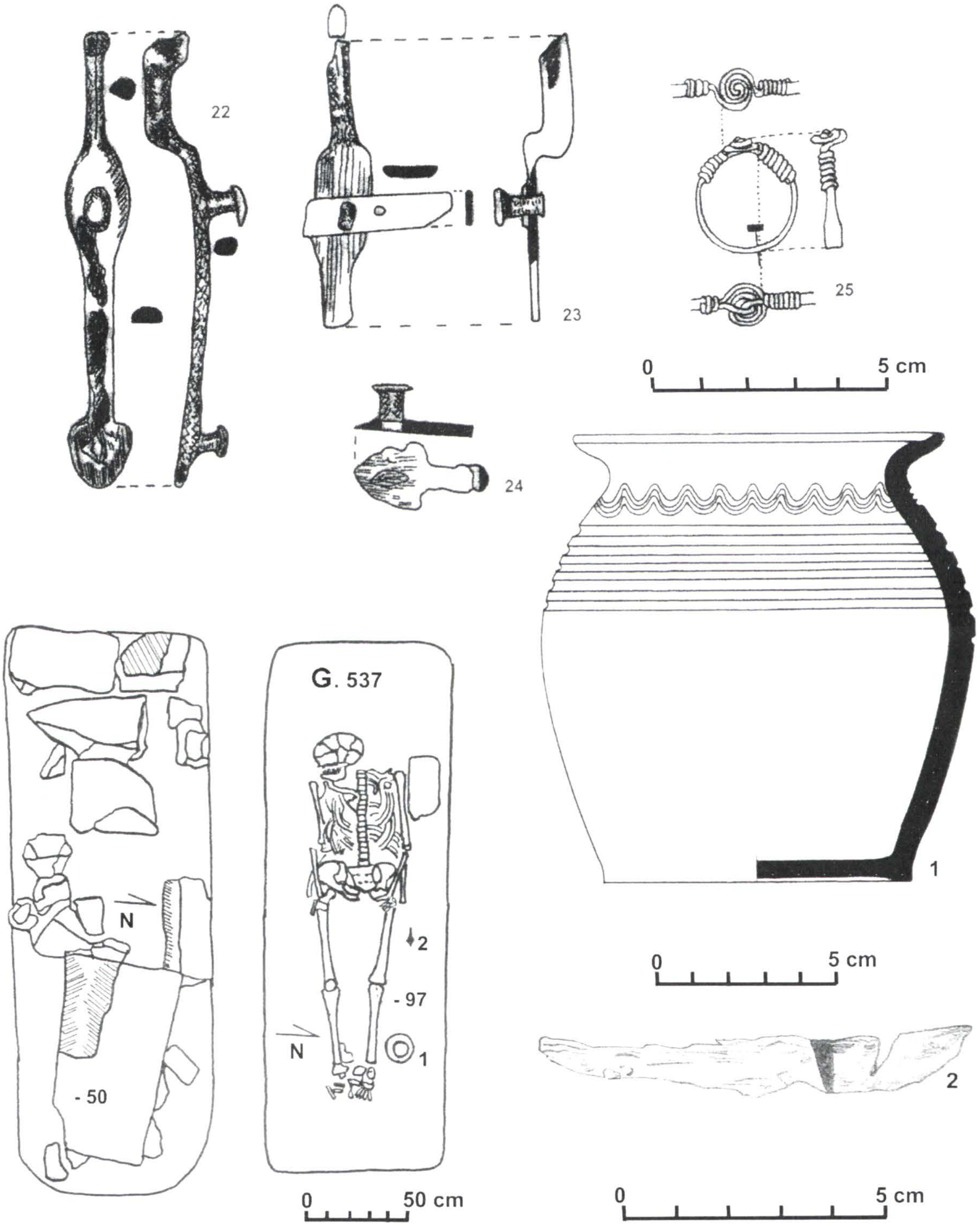
Pl. 5. 9-21. G. 304 with the funerary inventory (drawings: M. Blăjan).


32
29
28
27
26
24
22
30
33
34
23
25
0
5 cm
31
35
36
37

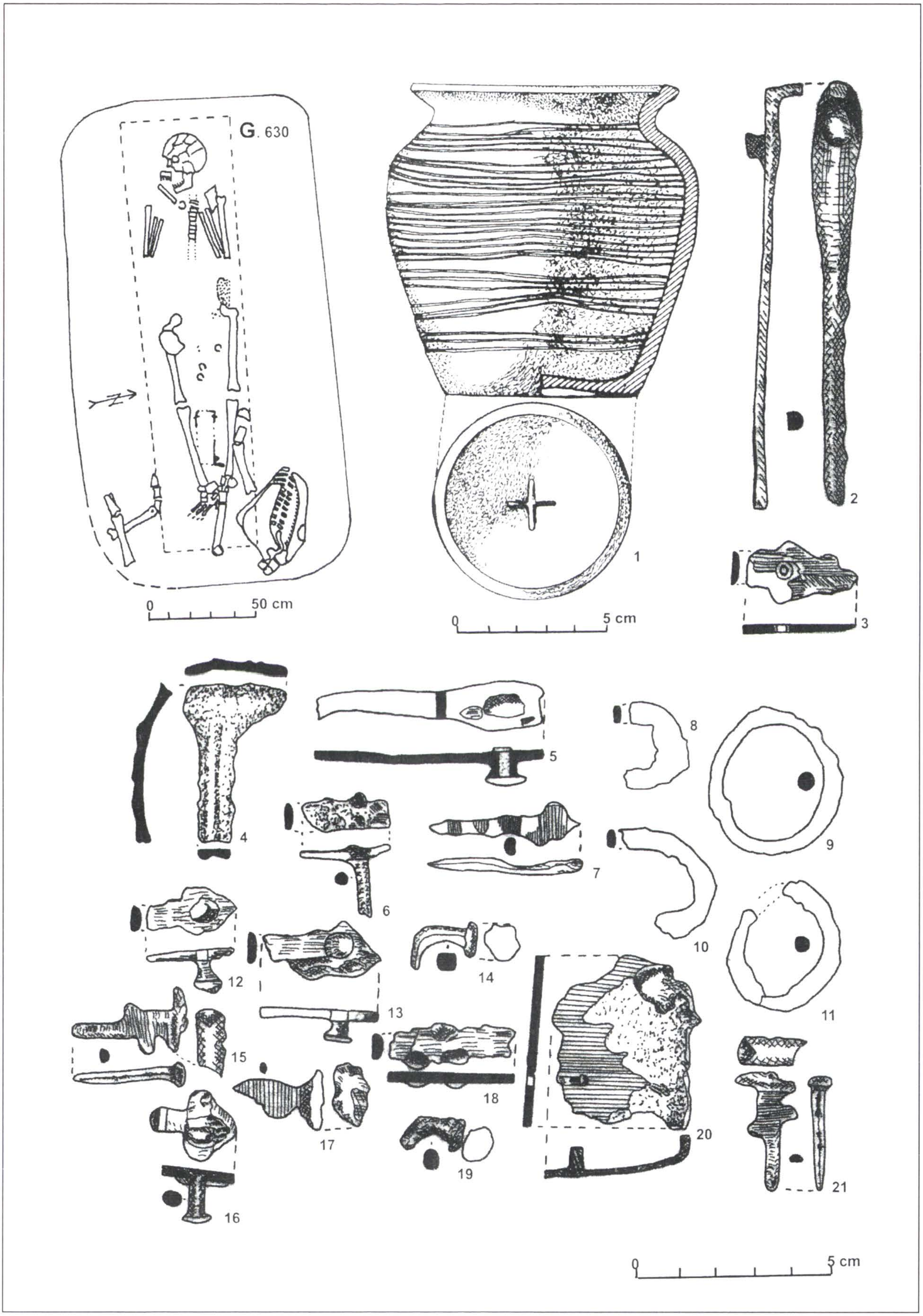
Pl. 6. 22-37. G. 304 with the funerary inventory (drawings: M. Blăjan).


G. 517
N
30
0
50 cm
1
2
3
4
5
6
7
8
9
10
11
12
13
0
5 cm
0
5 cm
0
5 cm

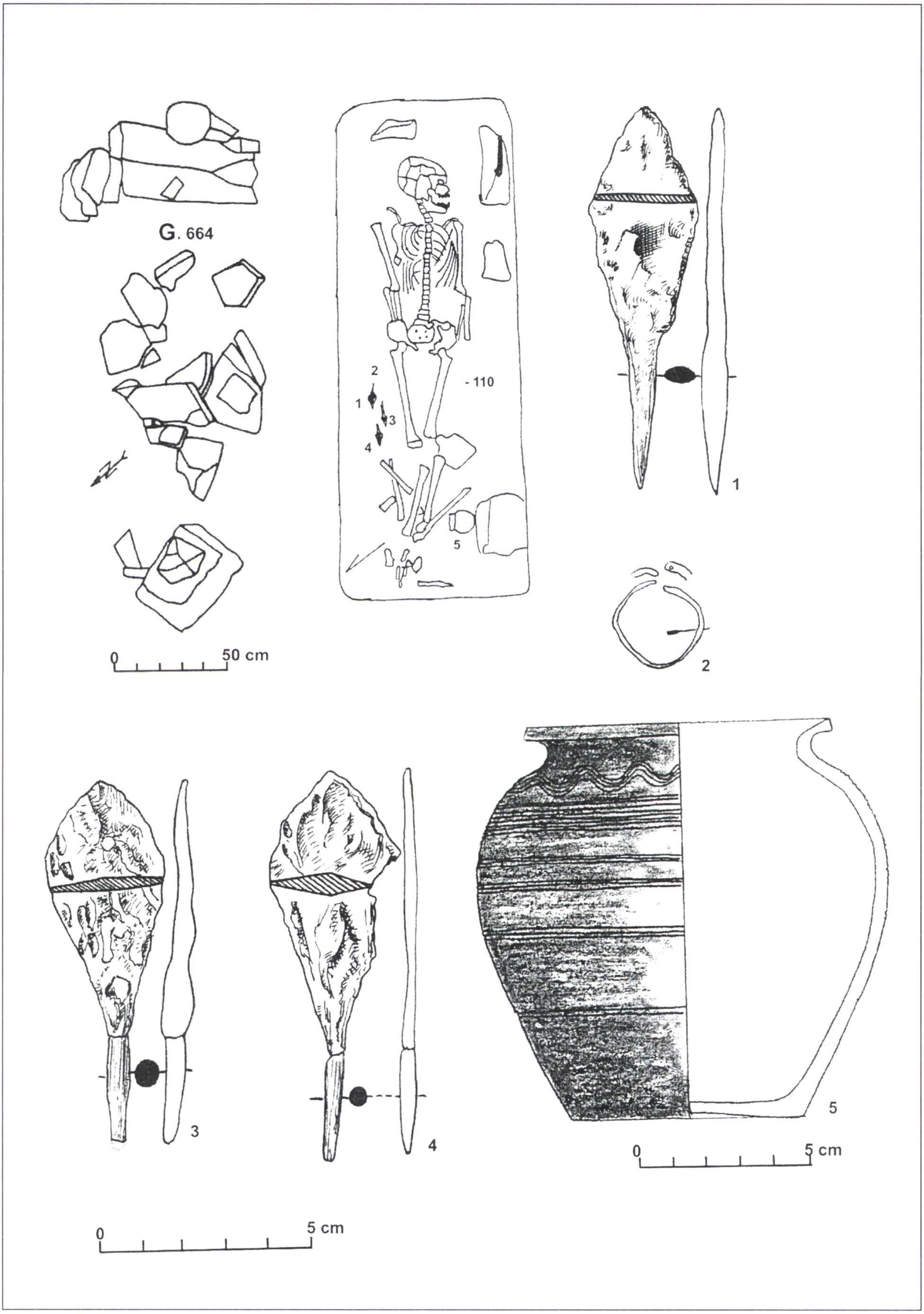
Pl. 7. 1-13. G. 517 with the funerary inventory (drawings: M. Blăjan).


22
23
25
0
5 cm
24
1
G. 537
N
2
- 97
N
1
- 50
0
5 cm
2
0
50 cm
0
5 cm

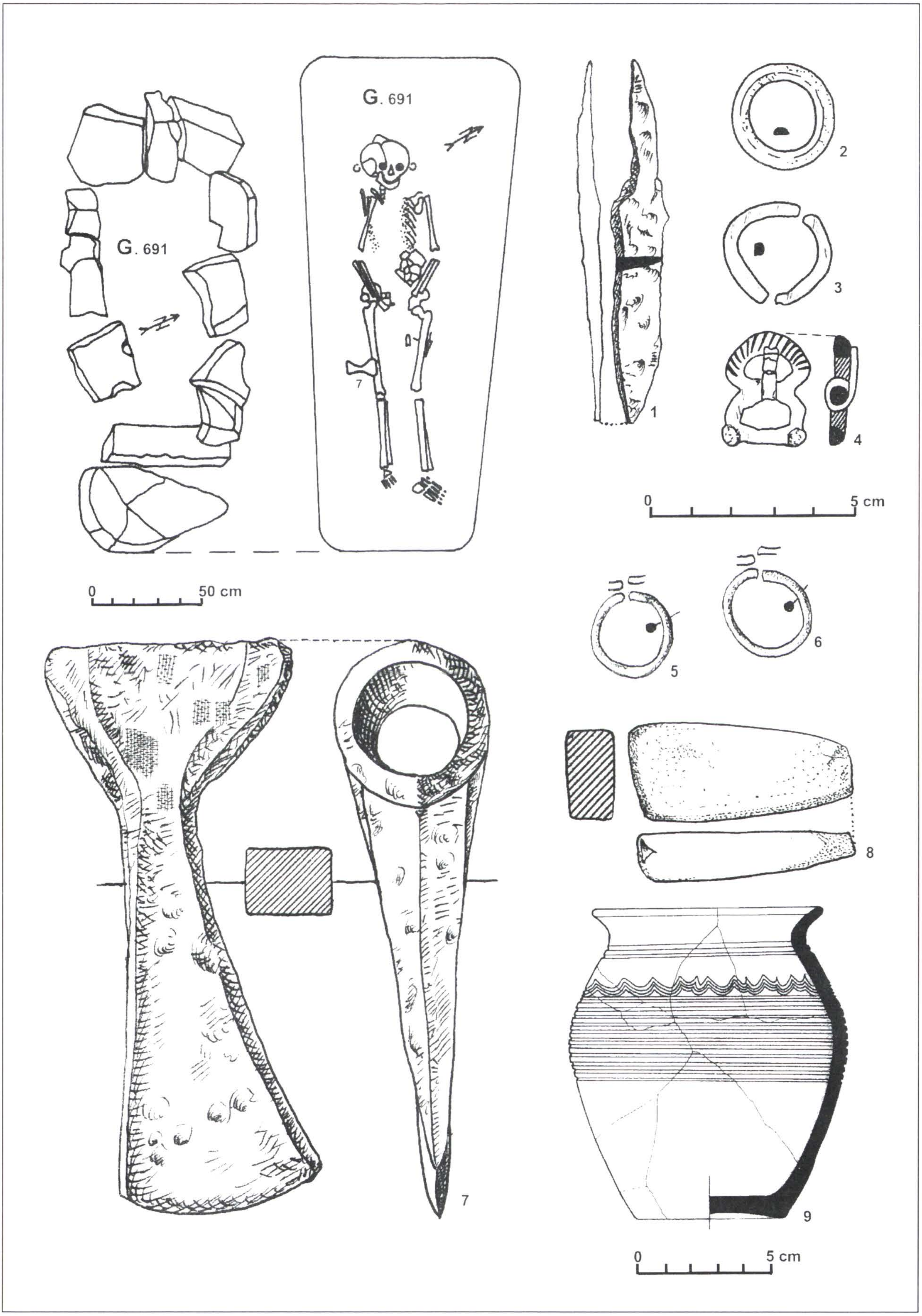
Pl. 8. 22-25. G. 630 with the funerary inventory (drawings: M. Blăjan);
1-2. G. 537 with the funerary inventory (drawings: M. Blăjan).


G. 630
0
50 cm
1
2
3
0
5 cm
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
0
5 cm

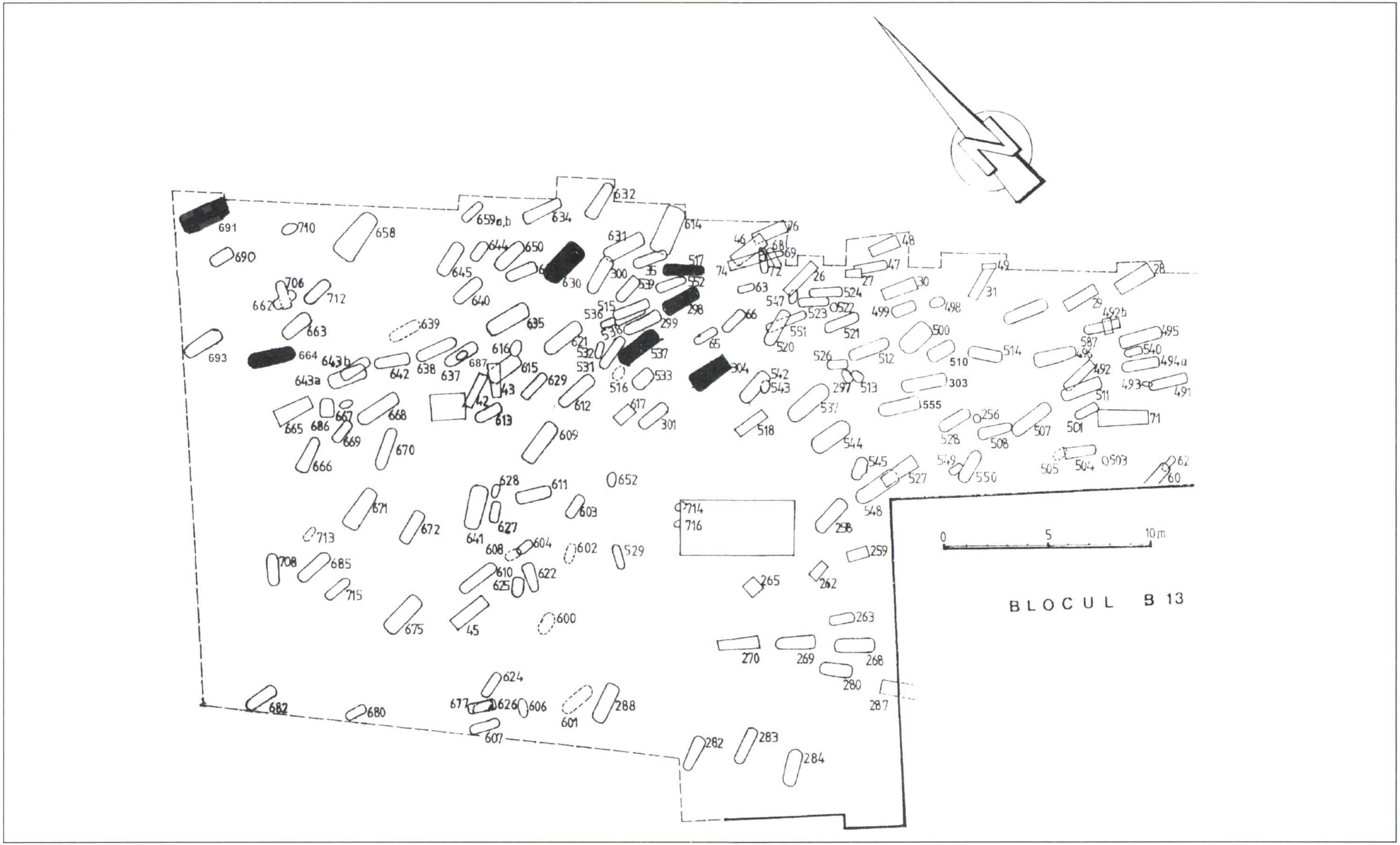
Pl. 9. 1-21. G. 630 with the funerary inventory (drawings: M. Blăjan).


G. 664
0
50 cm
2
1
3
4
- 110
5
1
2
3
4
5
0
5 cm
0
5 cm

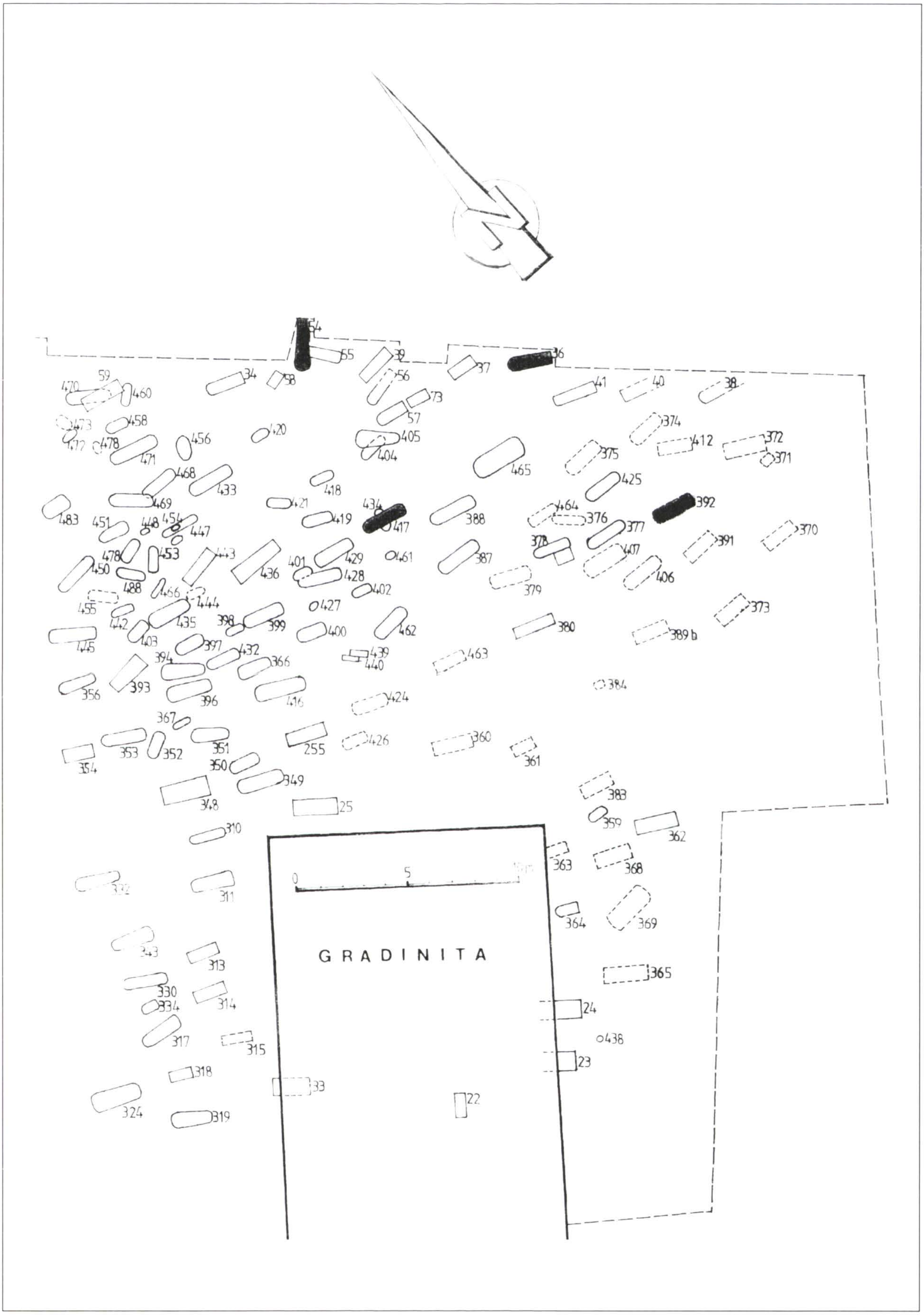
Pl. 10. 1-5. G. 664 with the funerary inventory (drawings: M. Blăjan).


G. 691
G. 691
7
1
2
3
4
0
5 cm
0
50 cm
5
6
8
7
9
0
5 cm

Pl. 11. 1-9. M. 691 with the funerary inventory (drawings: M. Blăjan).


BLOCUL B 13
0
5
10 m
691
710
658
659a,b
634
632
614
690
645
644
650
630
631
300
517
552
298
299
537
304
706
712
662
663
639
635
640
693
664
643b
643a
642
638
637
687
616
615
629
621
532
531
536
515
516
533
542
543
665
686
667
668
669
670
666
42
43
613
612
617
301
609
518
544
545
527
548
628
611
603
652
714
716
671
672
713
641
627
608
604
602
529
258
259
708
685
715
610
625
622
265
262
675
45
600
263
270
269
268
280
287
624
677
626
606
601
288
682
680
607
282
283
284
46
76
68
69
72
74
63
66
65
26
27
47
48
30
49
31
28
29
524
523
522
547
551
520
521
526
512
297
513
499
498
500
510
514
303
555
256
528
508
507
501
71
549
550
505
504
503
62
60
492b
495
587
496
540
494a
492
493
491
511
537

Pl. 12. Location of G. 691, G. 664, G. 630, G. 517, G. 298, G. 537 band G. 304 on the ground plan of the necropolis.


54
55
39
36
37
56
34
58
470
59
460
41
40
38
73
57
473
458
374
472
478
456
420
405
404
412
372
371
471
375
465
468
425
433
418
469
421
434
392
483
451
448
454
419
417
388
464
376
377
447
378
370
391
478
453
443
401
429
461
387
407
450
436
428
406
488
466
402
379
455
444
427
373
442
435
398
399
462
380
389 b
403
400
445
397
432
439
440
463
394
366
356
393
396
416
424
384
367
360
351
426
353
352
255
361
354
350
349
383
348
25
359
362
310
363
0
5
10m
368
332
311
364
369
GRADINITA
343
313
365
330
314
334
24
317
315
438
318
23
33
22
324
319

Pl. 13. Location of G. 54, G. 417, G. 36and G. 392 on the ground plan of the necropolis.

Habitation Traces From the Age of the Árpáds on the Boundary of Sângeorgiu de Mureş*

Keve **László**

Abstract: *Several pottery fragments and a pot with special decoration were discovered during works for sewage ditches on the border of the settlement of Sângeorgiu de Mureș, on the spot called Sub Ghera. After field walks and the geophysical survey of the terrain, in 2007 and 2009 we were able to perform archaeological trial excavations that confirmed the existence of habitation traces dated to the Age of the Árpáds. The radiocarbon analysis of a sample obtained from an animal bone helped with the dating of the pottery.*

Keywords: *Sângeorgiu de Mureș, the Age of the Árpáds, pottery fragments, radiocarbon analysis.*

Introduction. The municipality of Sângeorgiu de Mureș (Hu. Marosszentgyörgy) located on the left side of River Mureș, 6 km north-east of Târgu Mureș (Hu. Marosvásárhely) is crossed by the DN15 national road leading to Reghin (Hu. Szászrégen). From an administrative perspective, during the Middle Ages it belonged to the county of Turda (Hu. Torda vármegye) and after the formation of the Szekler Seats it became part of the Mureș Seat (Hu. Marosszék). The earliest written sources that mention the settlement date to the first third of the 14th century[1]. The archaeological researches performed around the Roman-Catholic church have confirmed the existence of a Late Árpádian-Era cemetery[2]. Pottery fragments from the same period have been discovered in several places on the border of the settlement[3] (Fig. 1). The most significant such spot is "Sub Ghera", discussed below.

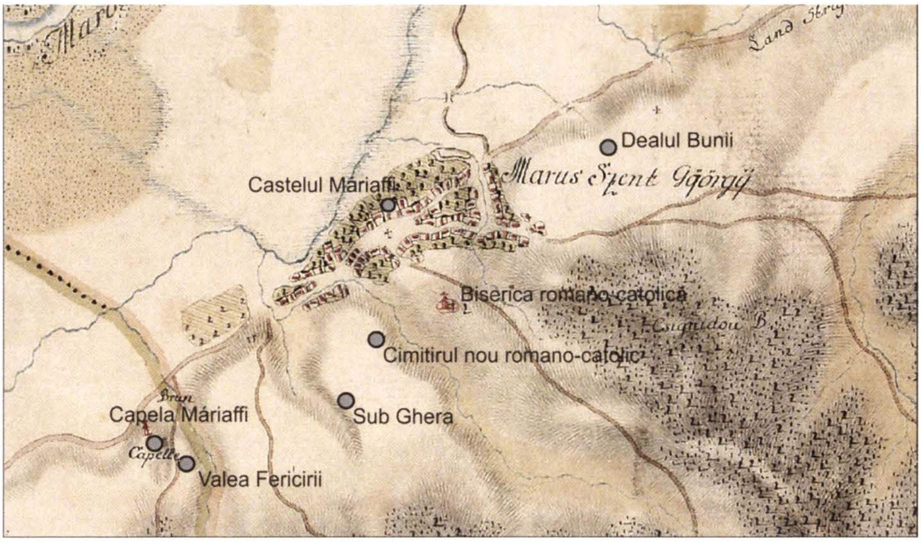


Fig. 1. Spots where pottery fragments from the Age of the Árpáds were discovered in Sângeorgiu de Mureș on the First Military Survey of the Habsburg Empire

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* English translation: Ana Maria Gruia.

[1] EO II, 178, 414, No. 463 and 1143.

[2] László, Gál 2015, 87–118.

[3] Székely 1959, 187–189; Zrínyi 1976, 147; Lazăr, Opriş 1989, 91–97; Lazăr 1995, 211–213; László 2017, 257, tabel 1.

The site. The spot "Sub Ghera" (Hu. Gyéra alja) is located on a high terrace of River Mureş in the eastern part of the settlement (Fig. 2). The site is accessible walking from the settlement along Izvorului (Hu. Csorgó utca) and Fântânii (Hu. Kútalja utca) streets. In 2005 on the spot called "Sub Ghera", also known as "Borsóföld" among the locals, native János Mester discovered an almost entirely preserved pot with special decoration and several pottery fragments. The items ended up in the collection of the Mureş County Museum. The pottery fragments were found on the edge of a drainage ditch that crossed the spot of "Borsóföld". The plot where the fragments were found is being used as an agricultural field and has been submitted, for several decades, to destructive exploitation. In 2007 and 2009 we were able to perform archaeological excavations on this spot, preceded by field evaluations and geophysical surveys[4]. In 2007 we opened three sections and six cases, while in 2009 we continued the excavations by opening five more sections (Pl. 1/1).

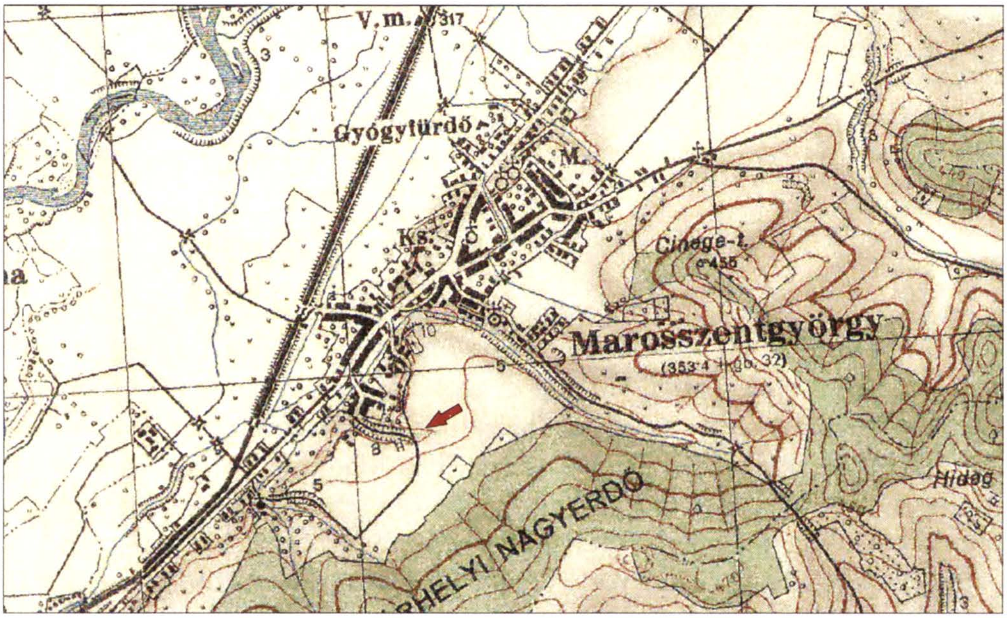

Fig. 2. The site "Sub Ghera" on the Military Survey of Hungary (1941)

Archaeological features. During the excavations we have identified two archaeological features dating to the Age of the Árpáds: feature Cx1 in case C1/2007 and feature Cx2 in section S4/2009 (Pl. 1/2, Pl. 8). The very small number of found features is mainly due to the fact that the plot was used for agricultural production and the deep plowing had destroyed the traces of ground level medieval structures. The two features are household refuse pits from the medieval settlement. Their upper part had been disturbed by a plow layer measuring 35–40 cm in thickness. Household refuse pit Cx1 was oval in shape, measuring 190 × 260 cm. Feature Cx2 was only partially uncovered. It had an oblong shape, slightly circular, measuring 400 × 120–178 cm, though the original length remains unknown. A single compact layer of filling was noted in both features.

Analysis of the archaeological material. Feature Cx1/2007 contained 178 ceramic fragments from pots, a clay whorl, and animal osteological remains. Feature Cx1/2007 was used as a household refuse pit. Out of the 178 pottery fragments, 37 were rim fragments, 123 were pot body fragments, while 17 were base fragments. One can also add the pot with special decoration, found almost entirely preserved, right on the spot of feature Cx1 before the excavation. Much of the pottery material is highly fragmented, so I am forced to illustrate only 45 of the fragments.

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[4] During this field walk I was accompanied by Sándor Berecki, while the geophysical surveys were performed by Călin Şuteu, Sándor Berecki and myself.

From a methodological perspective I was interested in establishing the types of pots, the types of modeling, the tamper material of their fabric, the firing, and the decoration of the pots. From the perspective of shape, the following pots were identified in feature Cx1: jar-pots, clay cauldrons, pots with fluted neck, and bottle-type pots. Out of the 37 identified rims, one belongs to a pot with fluted neck, six to clay cauldrons and the rest to jar-type pots[5].

Regarding the type of production of the pots in feature Cx1, all are modeled on the slow-turning potters' wheel.

According to the composition of the fabric I was able to identify one type of fabric with sand and small-grain grit (grains measuring less than 1 mm in diameter) and another type with sand and grit (1–3 mm). The petrographic researches recently performed in Hungary on 11th–13th centuries pottery have indicated that one cannot always talk of an intentional tampering of the clay. On numerous occasions the potters used clay extracted from river banks, without cleaning it from impurities[6].

The majority of the pots display traces of oxidation firing, but some have been fired in reduction environments (Pl. 2/1, Pl. 5/8). Oxidation firing was often incomplete and due to the open firing one can note the so-called "fire clouds" phenomenon, rendering nuances ranging from gray to brick-red spots[7].

The pots were decorated through incision with the potters' comb, a small stick or a wooden knife, and the cogwheel. Among the ornaments one encounters grooves and oblique impressions performed with the finger or some wooden tool. From the perspective of the decorative motifs, the most interesting ornament can be encountered on the pot that triggered the archaeological investigations on the spot of "Sub Ghera". The body of this pot displays incisions in the shape of small fir trees. The first decoration consists of the depiction of a fir tree in a cartouche. At the same height on the body of the pot one notes two incised signs followed by three fir trees and four fir trees, respectively, in separate cartouches (Pl. 2). Fir tree ornaments can be encountered during the Bronze Age, but they were most often used by the Dacians during the La Tène Era. In the La Tène environment from Transylvania one encounters such decorative motifs in Racoş (Hu. Alsórákos), Ormeniş–*Tipia Ormenişului* (Hu. Ürmös)[8] and Sângeorgiu de Mureş "Dealul Bunii"[9]. During the Árpádian Era the fir tree decoration is extremely rarely encountered in the entire Carpathian Basin. Besides the pot under discussion, the only other depiction of a fir tree is on a pottery fragment found on the spot of "Fundătura" from Archiud (Hu. Mezőerked), approx. 42 km from Sângeorgiu de Mureş, in a dwelling dated to the 11th–12th centuries[10].

On the other pottery fragments from feature Cx1 one encounters ornamental motifs characteristic to the Age of the Árpáds: wavy stripes, straight stripes, wavy lines, horizontal lines, oblique pricks, and cogwheel decoration. The combs used for the wavy and straight stripes had between two and five teeth each. On a single fragment I noted the combination of wavy and horizontal stripes (Pl. 4/5) and of wavy lines with oblique pricks made with a three-tooth comb (Pl. 4/6). In regard the oblique pricks one should also mention the combination of two rows of oblique pricks performed in opposite directions (Pl. 6/1).

Out of the 178 pottery fragments, 73 display different types of decorations. The following percentages according to the ornamental motifs can be noted:

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[5] Due to the high fragmentation of the material I have avoided percentage analyses based on the total number of fragments. It is impossible that each of the 123 fragmentary bodies that I have identified represent a pot each.

[6] Simonyi 2005, 43.

[7] Renfrew, Bahn 1999, 320.

[8] Costea *et al.* 2008, 171, pl. V/1–3.

[9] Lazăr 1993, 151, fig. 3.

[10] Gaiu 2003, 83, pl. V/8.

Total no. of fragments	178
– wavy stripes	15
– straight stripes	10
– wavy stripe and straight stripe	1
– wavy stripe with comb-made oblique pricks	1
– wavy lines	12
– horizontal lines	15
– oblique pricks	14
– cogwheel decoration	4
– fir tree motifs	1

Table 1. Ornaments encountered on the pottery fragments in Cx1.

Only partial data are available regarding the shape and dimensions of the pots. The diameter of jar-type pots varies between 14 and 21 cm. The rim of pots with fluted neck measures 14 cm. From the perspective of orientation, one notes the following types of rims: slightly flared rims, moderately flared rim, strongly flared rims, and slightly in-turned rims. Among the slightly flared rims one encounters the variant with the spout upwards and the spout downwards. Among the moderately flared rims one encounters rounded straight rims, thinned straight rims, obliquely cut straight rims, and rims with upwards spout. Among the strongly flared rims one encounters variants with slightly rounded rims, cut straight and with downwards spout. The pot with fluted neck has a straight rim, slightly inwardly pulled. The diameter of the discovered bases varies between 8 and 14 cm. The bases of the pots are cut, except for two on which one notes a slightly rounded prominence in the area where they met the wall (Pl. 5/9, Pl. 6/10).

In the case of clay cauldrons the diameter of the rim varies between 26 and 32 cm. According to the type of rim, they can be divided into plain and profiled rims on the outside. Among the latter one encounters an L-shaped variant and a square variant (Pl. 7/3, 5, 6).

Regarding the shape of the pots, out of the six main types and subtypes of pots encountered in the area of the Mureş Seat[11], four types can be identified here. Besides the jar-type pots and the clay cauldrons used as kitchen pots, the pot with fluted necks is a novelty.

In feature Cx1/2007, used as a household refuse pit, we only found ceramic materials and animal bone materials. Thus, for the dating of the feature one has to turn to the shape and the decoration of the pots and to the osteological material. Feature Cx1 contained the pot with fluted cylindrical neck, a shape characteristic to the Early Árpádian Era. Clay cauldrons were used between the 11th century and the beginning of the 14th century. Pots with cylindrical fluted neck found in Transylvania in settlements have been attested outside our area of interest of the 10th–11th centuries in Moreşti (Hu. Malomfalva)[12], Gorneşti (Hu. Gernyeszeg)[13], Iernut (Hu. Radnót)[14], Dăbâca (Hu. Doboka)[15], Cluj-Mănăştur (Kolozsmonostor)[16], Aghireş (Hu. Egrespatak)[17], Lopadea Nouă (Hu. Magyarlapád)[18] and Vinţu de jos (Hu. Alvinc)[19]. One item was found in the Szekler Land, in Sâncrăieni (Hu. Csíkszentkirály), in an older chronological horizon[20]. A variant of the pot with fluted cylindrical neck with loops can be encountered in Moreşti[21] and Viile Tecii (Hu. Kolozsnagyida)[22].

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[11] László 2017, 257–260.

[12] Horedt 1984, 37, Abb. 20/6–10.

[13] László 2017, 259.

[14] Takács 2012, 442, 1 térkép.

[15] Iambor 1986, 594, 597, pl. 1, pl. 4/1–6; Iambor 2005, 372, pl. 43.

[16] Iambor 1986, 596, pl. 3/12.

[17] Băcueţ 2014, 259, pl. 79.

[18] Takács 2012, 442, 1 térkép.

[19] Nägler 1977, pl. 2/9.

[20] Takács 2012, 443, 1 térkép.

The pottery found in feature Cx1/2007 also displays decorations considered earlier, such as wavy and horizontal stripes, but wavy and horizontal lines are also present. There are also decorations performed with the cogwheel, a type that appeared in the second half of the 11th century. Oblique impressions were widely employed since the 11th century.

The animal bone material found in Cx1 indicates the practice of animal husbandry during the Árpádian Period in Sângeorgiu de Mureş. Out of the 113 bone fragments, 54 belong to cattle, 34 to caprovids, 22 from pigs, and one fragment each of horse and goose. The proportion between animal species indicates an animal husbandry typical to the rural environment. The presence of a deer antler fragment, found and cut after it had been shed, indicates the item was a workshop discarded piece[23].

For a more exact chronology of feature Cx1 I had a radiocarbon analysis performed on an animal bone at the Institute for Nuclear Researches of the Hungarian Academy in Debrecen. The analysis has indicated two possible time intervals: 1020–1050 and 1080–1160[24]. Based on the radiocarbon analyses, feature Cx1 is to be chronologically included in the first half of the 11th century or between the end of the 11th century and the middle of 12th century. According to the decoration on the pottery fragments and the shape of the pots, I suggest feature Cx1 should be dated to the 11th century.

In 2009, continuing the excavations in section S4 I have identified a new Árpádian-Era archaeological feature. Feature labeled Cx2/2009, in shape of a ditch, was located 15 m apart from feature Cx1/2007. By processing the ceramic material I was able to identify the following number of pot fragments: 56 rim parts, 91 body fragments, and 21 shards from pot bases[25].

From a methodological perspective, like in the case of feature Cx1 I was interested in the type of modeling, the tamper material, the firing, the decoration of the pots, and in establishing the type of pot. From the perspective of shape, the following types of pots have been identified in feature Cx1: jar-type pots, bowls similar to flower pots, and bottle-type pots. Out of the 56 identified rim fragments, one belongs to a bowl, one to a bottle-type pot, and the rest to jar-type pots.

According to the type of production, the pots had been modeled on the slow wheel. I was only able to note traces of modeling on the fast wheel in the case of a single item (Pl. 12/1).

According to the structure of the fabric, I was able to identify one type with sand and grit with the grain measuring less than 1 mm in diameter and another type with sand and grains of grit measuring between 1 and 3 mm. The fine fabric type with grit less than 1 mm predominates the lot under discussion.

The pots show traces of oxidation firing, in rare cases of reduction firing (Pl. 10/8). On most of them one can note evidence of secondary firing, as they were used as cooking pots.

The tools used for the decoration of the pots in this lot were: the potters' comb with two to six teeth, a small stick or a wooden knife, and the cogwheel. Out of the 168 fragments, 83 display various types of ornaments. They were distributed thus:

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[21] Horedt 1984, 37, Abb. 20/7.

[22] László 2017, 259.

[23] Benkő 2012, 668–669.

[24] Sample no. 7: DeA–2006.1.1 – 1020–1050, 1080–1160 cal AD 1σ (calibrated with the Calib 6.1.1 RADIOCARBON CALIBRATION PROGRAM software)

[25] In the case of the pottery material from Cx2 I counted as a single item fragments that fit together or which belonged to the same pot.

Total no. of fragments	168
– wavy stripes	23
– straight stripes	19
– wavy lines	2
– horizontal lines	6
– oblique pricks	23
– oblique pricks with wavy stripe	4
– cogwheel decoration	7

Table 2. Ornaments encountered on the pottery fragments in Cx2.

The main decorative motif is wavy stripes, followed by oblique pricks and straight stripes. In four cases oblique pricks were combined with wavy stripes. I was only able to observe the presence of wavy lines in four cases and of horizontal lines in six cases.

One can reconstruct the shape and dimensions of the pots on the basis of the preserved rim fragments. With two exceptions, the rims belong to cooking jar–type pots. The diameter of the rims varies between 14 and 20 cm. The rim of the bottle-type pot measures 7 cm and the rim of the bowl measures 17 cm in diameter. From the perspective of orientation, the rims of the jar-type pots were either moderately flared or strongly flared.

Among the slightly flared rims one encounters several variants: rounded straight rims, thinned straight rims, and obliquely cut straight rims. Among the strongly flared rims one encounters variants with slightly rounded rims, thickened rims, those cut strait, and those with grooving. The bottle-type pot has a flared rim, up-turned, provided with two flutes. The variant with flute can be encountered in Şimleul Silvaniei (Hu. Szilágysomlyó)[26]. The rim of the bowl is flared and thickened. The bases of the pots measure between 8 and 11 cm in diameter. They are cut except for one pot that has a ring-type base (Pl. 12/10).

In feature Cx2 I have identified three of the six types and subtypes encountered in the valley of the Upper Mureş. I did not find fragments from clay cauldrons, but the bowl in the shape of a flower pot and the fluted bottle-type pot are novel.

Similar to the pottery in feature Cx1/2007, the fragments found in feature Cx2 also displays wavy stripes, horizontal stripes, wavy lines, horizontal lines, cogwheel decoration, and oblique impressions. Unlike feature Cx1, in feature Cx2 the oxidation firing of the pots is more complete and the rims of the pots are in the majority of cases strongly flared. For the chronological identification of feature Cx2 I suggest a later dating than feature Cx1, namely the end of the 11th century and the first half of the 12th century.

A bottle-type pot fragment was found, lacking a context, in case C4/2007 that is chronologically closer to the pottery material in feature Cx1 (Pl. 6/3).

Conclusions. On the basis of the discoveries made on the spot called "Sub Ghera" in Sângeorgiu de Mureş one can form a restricted picture of the long-gone rural settlement that once stood there. The archaeological material consists of pottery fragments and animal bones. Taking into consideration the archaeological material, pottery making and animal husbandry were important activities. Even if no agricultural iron tools have been found, animal husbandry was inseparable from agriculture. The presence of the whorl indicates the practice of weaving and the deer antler fragment as workshop discarded piece indicates that bone was turned into various tools. Analyzing the pottery material from features Cx1 and Cx2 one notes the introduction of rare types of pots such as the pot with fluted cylindrical neck and the bottle-type pot. The pot with special decoration is rare and without analogy in the Carpathian Basin.

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[26] Pop *et al.* 2006, 125, pl. 29/2; Băcueţ-Crişan 2014, 303, pl. 123/2.

CATALOGUE

Sângeorgiu de Mureş "Sub Ghera", Cx1/2007

1. Jar-pot, modeled by hand, with inclusions of sand and grit (>1 mm), gray on the outside, grayish-brick-red on the inside, with a gray core. Displays traces of secondary firing both on the inside and on the outside. The decoration consists of incised fir trees. BD: 9.5 cm, WT: 0.6 cm (Pl. 2/1, 2, 3).
2. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), light brick-red on the outside, gray on the inside, with gray core. The rim of the pot is flared and obliquely cut. The Fragment displays cogwheel decoration. RD: 20 cm, WT: 0.7 cm (Pl. 3/5).
3. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–2 mm), light brick-red on the outside, light brick-red and black on the inside due to secondary firing. The rim of the pot is flared and rounded (thickened rim). The decoration consists of oblique pricks incised in two rows. RD: 21 cm, WT: 0.8 cm (Pl. 3/6).
4. Fragment from the rim of a wheel-thrown pot modeled out of fabric with inclusions of sand and grit (1–3 mm), gray-brown both inside and outside, with gray core. The rim of the pot is flared and can be included in the group of rims with downwards spout. RD: 18 cm, WT: 0.5 cm (Pl. 3/4).
5. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), grayish-brick-red both outside and inside, with gray core. The rim of the pot is flared and can be included in the category of rims with downwards spout. The decoration consists of two wavy stripes incised with a four-tooth comb. RD: 18 cm, WT: 0.8 cm (Pl. 3/3).
6. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red on the outside, grayish brick-red on the inside. The rim of the pot is flared and cut straight. The ornament consists of a wavy stripe incised with a five-tooth comb. RD: 17 cm, WT: 0.7–0.8 cm (Pl. 3/1).
7. Fragment from the rim of a wheel-thrown pot out of fabric with inclusions of sand and grit (>1 mm), brick-red on both outside and inside, with blackish spots due to secondary firing. The rim of the pot is flared and rounded. RD: 17–18 cm, WT: 0.9 cm (Pl. 3/2).
8. Fragment from the rim of a wheel-thrown pot out of fabric with inclusions of sand and grit (>1 mm), blackish-brown on the outside and black on the inside. The rim of the pot is flared and rounded. Under the shoulder one notes two incised lines. RD: 14 cm, WT: 0.6–0.9 cm (Pl. 4/2).
9. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red brown both outside and inside, with blackish spots due to secondary firing. The rim of the pot is flared and can be included in the category of rims with upturned spout. On the shoulder of the pot one notes an ornament consisting of a wavy line incised with a five-tooth comb. RD: 18 cm, WT: 0.6–0.9 cm (Pl. 4/4).
10. Fragment from the rim of a clay cauldron modeled on the slow wheel out of fabric with inclusions of sand and grit (1–2 mm), brick-red in color both on the outside and on the inside, with gray core. The rim of the pot is profiled towards the outside and obliquely cut. RD: 28 cm, WT: 0.9 cm (Pl. 7/3).
11. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both on the outside and on the inside, with gray core. The rim of the pot is flared and rounded, with traces of secondary firing. The decoration, on the shoulder of the pot, consists of an incised straight line. RD: 17 cm, WT: 0.7 cm (Pl. 4/3).
12. Fragment from the rim of a clay cauldron modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), blackish-brown in color on the outside due to secondary firing and light brown on the inside, with gray core. The rim of the pot is profiled towards the outside and obliquely cut, and can be included in the type of square rims. RD: 32 cm, WT: 1–1.2 cm (Pl. 7/5).

13. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (1–3 mm), blackish-brown both outside and inside. The rim of the pot is profiled, part of the category of rims with upwards and downwards spout. On the shoulder of the pot one encounters two intersecting wavy stripes incised with a five-tooth comb. RD: 16 cm, WT: 0.6 cm (Pl. 5/3).

14. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), blackish-brown due to secondary firing both on the outside and on the inside, with black core. The rim of the pot is flared and rounded. On the shoulder of the pot one encounters the decoration consisting of oblique pricks incised in two rows. RD: 20 cm, WT: 0.6–0.7 cm (Pl. 5/2).

15. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), light brown in color with gray spots both outside and inside, with gray core. The rim of the pot is flared, up-pulled, rounded, and thinned. On the shoulder one encounters the ornament consisting of two rows of oblique pricks and an incised wavy stripe. RD: 15 cm, WT: 0.7 cm (Pl. 6/1).

16. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both on the outside and on the inside, with gray core. On the rim one can see the blackish traces of secondary firing. The rim of the pot is flared, slightly rounded, and thinned. RD: 16 cm, WT: 1 cm (Pl. 5/1).

17. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), blackish-brick-red in color on the outside and light brown with a black line, a result of secondary firing, on the inside, with black core. The rim of the pot is flared and displays a groove in the middle. The decoration is located on the shoulder and consists of a straight incised stripe made with a four-tooth comb. RD: 17 cm, WT: 0.7 cm (Pl. 7/1).

18. Fragment from the rim of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), brick-red-black on the outside and inside, with black core. The rim of the pot is flared and slightly rounded. As decoration, one encounters a wavy stripe incised with a five-tooth comb. RD: 16 cm, WT: 0.7–0.8 cm (Pl. 6/2).

19. Fragment from the body of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), blackish-brown in color both on the outside and on the inside, with black core. The ornament consists of two rows of incised oblique pricks. WT: 0.7 cm (Pl. 6/8).

20. Fragment from the body of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (1–3 mm), light brown both outside and inside, with gray core. The Fragment displays cogwheel decoration. WT: 0.8 cm (Pl. 4/8).

21. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), blackish-brick-red on the outside and brick-red on the inside. The decoration consists of oblique impressions made with the three-tooth comb and an incised wavy stripe consisting of two lines. WT: 0.6 cm (Pl. 4/6).

22. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), grayish-brick-red on the inside. The decoration consists of a wavy stripe incised with a comb with two teeth. WT: 0.7 cm (Pl. 5/6).

23. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), blackish-brown in color both outside and inside, with black core. As for the decoration, it consists of three rows of cogwheel decorations. WT: 0.5–0.7 cm (Pl. 4/7).

24. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick red on the outside and black on the inside. The decoration consists of two wavy stripes incised with the comb with two teeth. WT: 0.8 cm (Pl. 5/7).

25. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), light brick-red on the outside and light brown on the inside. The decoration consists of two straight incised lines. WT: 0.7–0.8 cm (Pl. 6/5).

26. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red both outside and inside, with black core. The decoration consists of two straight incised lines. WT: 0.8 cm (Pl. 6/6).

27. Fragment from the rim of a clay cauldron modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red-gray on the outside, light brick-red on the inside, with gray core. The rim of the pot is profile towards the outside and can be included in the type of square rims. WT: 0.9 cm (Pl. 7/6).

28. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red on the outside, grayish-brick-red on the inside, with gray core. The decoration consists of two wavy lines incised with a five-tooth comb. WT: 0.7 cm (Pl. 5/4).

29. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), grayish-brown on the outside and gray on the inside. The decoration consists of a wavy stripe incised with a five-tooth comb. WT: 0.7 cm (Pl. 6/7).

30. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red-black both outside and inside, with black core. The decoration consists of two straight stripes incised with a five-tooth comb. WT: 0.7 cm (Pl. 4/5).

31. Fragment from the body of a clay cauldron modeled on the slow wheel, with inclusions of sand and grit (1–3 mm), grayish-brown both outside and inside, with black core. WT: 1.1 cm (Pl. 7/4).

32. Fragment from the body and base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), blackish-brown on the outside and blackish-gray on the inside. The base of the pot is cut straight and one notes the traces of a potter's mark. BD: 12 cm, WT: 0.6 cm (Pl. 4/9).

33. Fragment from the body and base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), grayish-brick-red both outside and inside, with black core. The area where the base meets the wall is rounded. BD: 8 cm, WT: 0.9–1 cm (Pl. 6/10).

34. Fragment from the body and base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with black core. The base of the pot is cut straight and is black in color due to secondary firing. BD: 8 cm, WT: 0.7 cm (Pl. 6/11).

35. Fragment from the base of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), brick-red outside and grayish-brown inside, with black core. The base of the pot is cut straight. BD: 12 cm, WT: 0.8 cm (Pl. 6/9).

36. Fragment from the base of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), black in color both outside and inside. The base of the pot is cut straight. BD: 8.5 cm, WT: 0.8 cm (Pl. 5/8).

37. Fragment from the base of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), brick-red on the outside and brick-red-gray on the inside. The base of the pot is cut straight, with a slightly rounded prominence in the area where it meets the wall. BD: 10 cm, WT: 0.6 cm (Pl. 5/9).

38. Fragment from the base of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), brick-red in color with blackish spots and brick-red on the inside, with black core. The base of the pot is cut straight. BD: 14 cm, WT: 0.9 cm (Pl. 7/8).

39. Fragment from the base of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), gray-brick-red both outside and inside, with gray core. The base of the pot is cut straight. BD: 12 cm, WT: 0.7 cm (Pl. 7/9).

40. Fragment from the base of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), light brown both outside and inside, with black core. The base of the pot is cut straight. WT: 1.1 cm (Pl. 4/10).

41. Fragment from the body of a pot modeled on the slow wheel, out of fabric with inclusions of

sand and grit (1–3 mm), light brick-red both outside and inside, with gray core. The decoration consists of two incised lines. WT: 0.8 cm (Pl. 7/7).
42. Fragment from the body of a pot modeled on the slow wheel, out of fabric with inclusions of sand and grit (>1 mm), light brown both outside and inside, with black core. The decoration consists of a straight stripe incised with a four-tooth comb. WT: 0.8 cm (Pl. 6/4).
43. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color with a black spot on the outside and black inside due to secondary firing. The decoration consists of a straight line incised with a three-tooth comb. WT: 0.7 cm (Pl. 5/5).
44. Whorl made of clay with inclusions of sand and grit (>1 mm), light brown in color. W: 3.2 cm, H: 1.7 cm (Pl. 7/2).
45. Fragment from the rim of a pot with fluted neck modeled on the slow wheel out of fabric with inclusions of sand and grit with grains smaller than 1 mm, blackish-brown in color both outside and inside, with black core. RD: 14 cm; WT: 0.6 cm (Pl. 4/1).

Sângeorgiu de Mureş "Sub Ghera", Case C4/2007

1. Fragment from the neck of a bottle-type pot modeled on the slow wheel out of fabric with inclusions of sand and grit with grains smaller than 1 mm, brick-red in color both outside and inside, with gray core. WT: 0.6 cm (Pl. 6/3).

Sângeorgiu de Mureş "Sub Ghera", Cx2/2009

1. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit with grains (>1 mm), black-brick-red in color on the outside and black-brown on the inside. The black is due to secondary firing. The decoration consists of oblique incised pricks. The rim of the pot is flared and cut slightly obliquely. RD: 18 cm, WT: 0.8 cm (Pl. 9/6).
2. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color on the outside and grayish-brick-red on the inside. The decoration, placed on the shoulder of the pot, consists of oblique incised pricks. The rim of the pot is flared and cut slightly obliquely. RD: 15 cm, WT: 0.8–1 cm (Pl. 9/5).
3. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with blackish spots due to secondary firing. The core of the pot is black. The decoration consists of oblique incised pricks and a wavy stripe incised with a five-tooth comb. The rim of the pot is flared and cut slightly obliquely. RD: 15 cm, WT: 0.7–0.8 cm (Pl. 9/3).
4. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), blackish-brown in color both outside and inside due to secondary firing and with gray core. The decoration consists of oblique pricks incised in two rows and a wavy stripe incised with a comb. The rim of the pot is flared and cut straight. RD: 15 cm, WT: 0.7 cm (Pl. 9/2).
5. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with black spots due to secondary firing. The decoration consists of oblique incised pricks. The rim of the pot is flared and cut slightly obliquely. RD: 16 cm, WT: 0.6 cm (Pl. 9/4).
6. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), grayish-brick-red in color both outside and inside, with gray core. On the neck the pot displays a groove above oblique incised pricks and a wavy stripe incised with a four-tooth comb. The rim of the pot is flared and rounded. RD: 13 cm, WT: 0.7 cm (Pl. 10/2).
7. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), blackish-brown on the outside and black-brick-red on the inside due to

secondary firing. The core of the pot is gray. The decoration consists of oblique incised pricks. The rim of the pot is flared and slightly rounded. RD: 16 cm, WT: 0.7 cm (Pl. 9/1).

8. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), light brick-red in color with gray spots due to secondary firing on the outside and light brick-red on the inside. The core of the pot is gray. The decoration consists of oblique incised pricks and a wavy stripe incised with a three-tooth comb. The rim of the pot is flared and slightly rounded. RD: 18 cm, WT: 0.5–0.7 cm (Pl. 10/4).

9. Fragment from the rim of a bowl modeled on the slow wheel out of fabric with inclusions of sand and grit (>1mm), gray-brown on both outside and inside, with black core. The rim of the pot is flared. RD: 17 cm, WT: 0.9 cm (Pl. 10/1).

10. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red both outside and inside. The decoration consists of oblique incised pricks. The rim of the pot is flared and slightly obliquely cut. RD: 18 cm, WT: 0.8 cm (Pl.10/3).

11. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), gray-brown in color both outside and inside, with gray core. The decoration consists of a wavy stripe with a three-tooth comb. The rim of the pot is flared, thickened, and rounded. RD: 17 cm, WT: 0.7 cm (Pl. 11/1).

12. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with black spots due to secondary firing. The core of the pot is gray. The decoration consists of oblique incised pricks. The rim of the pot is flared and cut straight. RD: 17 cm, WT: 0.7–0.8 cm (Pl. 11/2).

13. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red in color both outside and inside, with black core. On the inner part of the rim one notes a black line due to secondary firing. The core is gray. The decoration consists of two straight stripes incised with a six-tooth comb. The rim of the pot is flared and thickened. RD: 16 cm, WT: 0.8 cm (Pl. 11/3).

14. Fragment from the rim of a wheel-thrown pot, made of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with black spots on the level of the rim due to secondary firing. The core of the pot is gray. The decoration consists of oblique incised pricks. The rim of the pot is flared and obliquely, with a groove on the inside. RD: 16 cm, WT: 0.6 cm (Pl. 12/1).

15. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), black-brick-red in color on the outside and black-brown inside due to secondary firing. The core of the pot is gray. It displays cogwheel decoration. WT: 0.6 cm (PL 10/5).

16. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with black spots on the level of the rim due to secondary firing. The core is black. The rim of the pot is flared and rounded. RD: 20 cm, WT: 0.8 cm (Pl. 12/3).

17. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), blackish-brown both outside and inside due to secondary firing. The core of the pot is gray. The rim of the pot is flared, thickened, and rounded. RD: 20 cm, WT: 0.8 cm (Pl. 12/6).

18. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brown in color with black spots both outside and inside due to secondary firing. The core of the pot is gray. The decoration consists of oblique incised pricks. The rim of the pot is flared and rounded. RD: 17 cm, WT: 0.6 cm (Pl. 12/5).

19. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), blackish-brick-red both outside and inside due to secondary firing. The

core of the pot is gray. The decoration consists of oblique incised pricks. The rim of the pot is flared and displays a groove on the inner side. RD: 17 cm, WT: 0.8 cm (Pl. 12/2).

20. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brown in color on the outside and blackish-brown on the inside due to secondary firing. The decoration consists of straight stripes incised with a five-tooth comb. WT: 0.7 cm (Pl. 10/6).

21. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red on the outside and gray on the inside due to incomplete firing. The decoration consists of oblique pricks placed in two incised rows. WT: 0.7 cm (Pl. 11/4).

22. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red on the outside and gray on the inside. The base of the pot is cut straight. BD: 10 cm, WT: 0.8 cm (Pl. 10/7).

23. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red on the outside and gray on the inside. The decoration consists of straight incised lines. WT: 0.7 cm (Pl. 11/5).

24. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color both outside and inside, with black spots due to secondary firing. The core of the walls is black. The decoration consists of oblique lines incised in two rows. WT: 0.7 cm (Pl. 11/6).

25. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red in color both outside and inside, with gray core. The base of the pot is blackish in color due to secondary firing. The decoration consists of three wavy stripes incised with a five-tooth comb. The base of the pot is cut straight. BD: 11 cm, WT: 0.8 cm (Pl. 12/8).

26. Fragment from the body of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), gray-brick-red in color both outside and inside due to secondary firing. The core of the wall is black. The decoration consists of two wavy stripes incised with a four-tooth comb. WT: 0.8 cm (Pl. 11/7).

27. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), black in color on the outside due to secondary firing and brown on the inside, with gray core. The base of the pot is cut straight. BD: 8 cm, WT: 0.7 cm (Pl. 10/8).

28. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), brick-red in color with black spots due to secondary firing and brown on the inside, with gray core. On the outer side of the wall one notes an oblique incision measuring 3 cm. The base of the pot is cut straight. BD: 10 cm, WT: 0.8 cm (Pl. 11/9).

29. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), blackish-brown in color due to secondary firing on both outside and inside, with black ore. The base of the pot is cut straight. BD: 8 cm, WT: 0.8 cm (Pl. 11/8).

30. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), grayish-brown on both outside and inside, with black core. The base of the pot is cut straight. BD: 10 cm, WT: 0.6 cm (Pl. 12/9).

31. Fragment from the base of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (1–3 mm), blackish-brown due to secondary firing both outside and inside, with gray core. The base of the pot is cut straight and displays a rounded prominence in the area where it meets the wall. BD: 10 cm, WT: 0.8 cm (Pl. 12/10).

32. Fragment from the rim of a pot modeled on the slow wheel out of fabric with inclusions of sand and grit (>1 mm), brick-red in color on the outside and brick-red with blackish spots on the inside due to incomplete firing. The core of the pot is gray. The rim of the pot is flared, cut straight, and provided with a groove on the inner side. RD: 17 cm, WT: 0.6 cm (Pl. 12/4).

33. Fragment from the rim of a bottle-type pot with fluted neck, modeled on the slow wheel out

of fabric with inclusions of sand and grit with grains less than 1 mm in diameter, brick-red both outside and inside, with grey core. RD: 7 cm; WT: 0.6 cm (Pl. 12/7).

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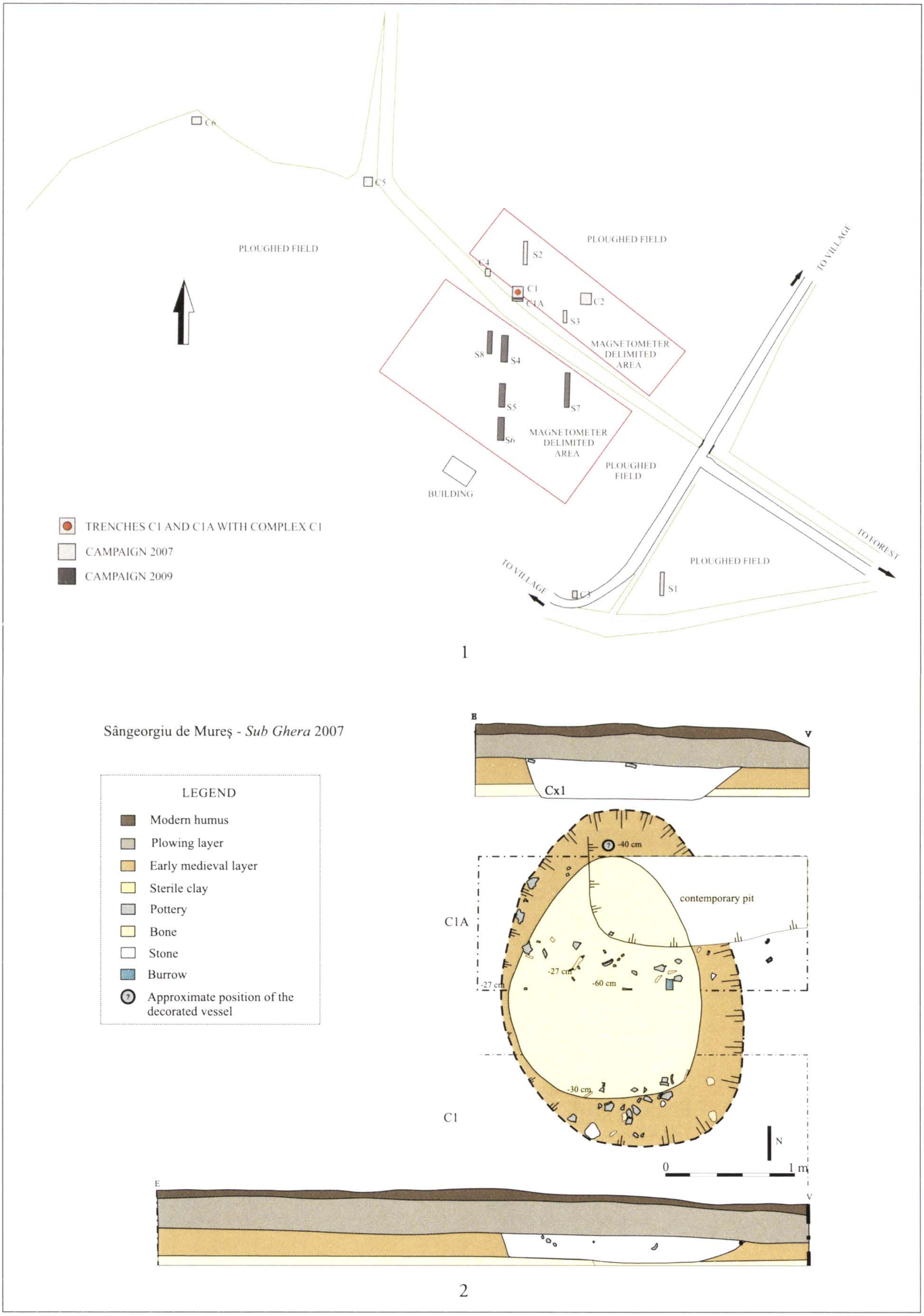
C6
C5
PLOUGHED FIELD
PLOUGHED FIELD
S2
C4
C1
C1A
C2
S3
MAGNETOMETER DELIMITED AREA
S8
S4
S5
S7
S6
MAGNETOMETER DELIMITED AREA
PLOUGHED FIELD
BUILDING
TO VILLAGE
TO FOREST
TO VILLAGE
C3
PLOUGHED FIELD
S1
TRENCHES C1 AND C1A WITH COMPLEX C1
CAMPAIGN 2007
CAMPAIGN 2009
1
Sângeorgiu de Mureş - Sub Ghera 2007
LEGEND
Modern humus
Plowing layer
Early medieval layer
Sterile clay
Pottery
Bone
Stone
Burrow
Approximate position of the decorated vessel
B
V
Cx1
-40 cm
contemporary pit
C1A
-27 cm
-27 cm
-60 cm
-30 cm
C1
N
0
1 m
E
V
2

Plate 1. Sângeorgiu de Mureş "Sub Ghera" 1. General plan of excavations; 2. C1 and C1A with feature Cx1.

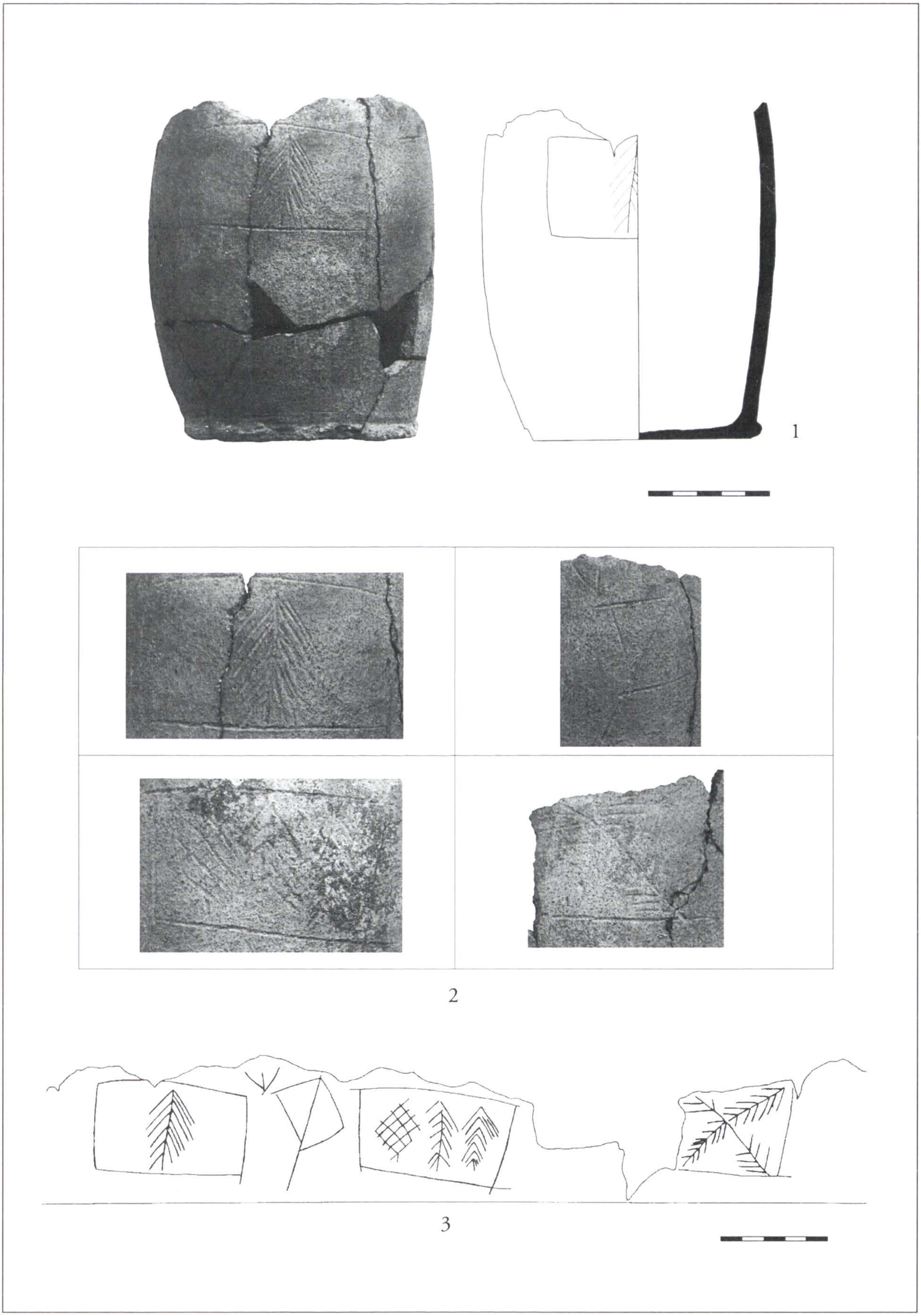

Plate 2. Sângeorgiu de Mureş “Sub Ghera”, vessel with special decoration.

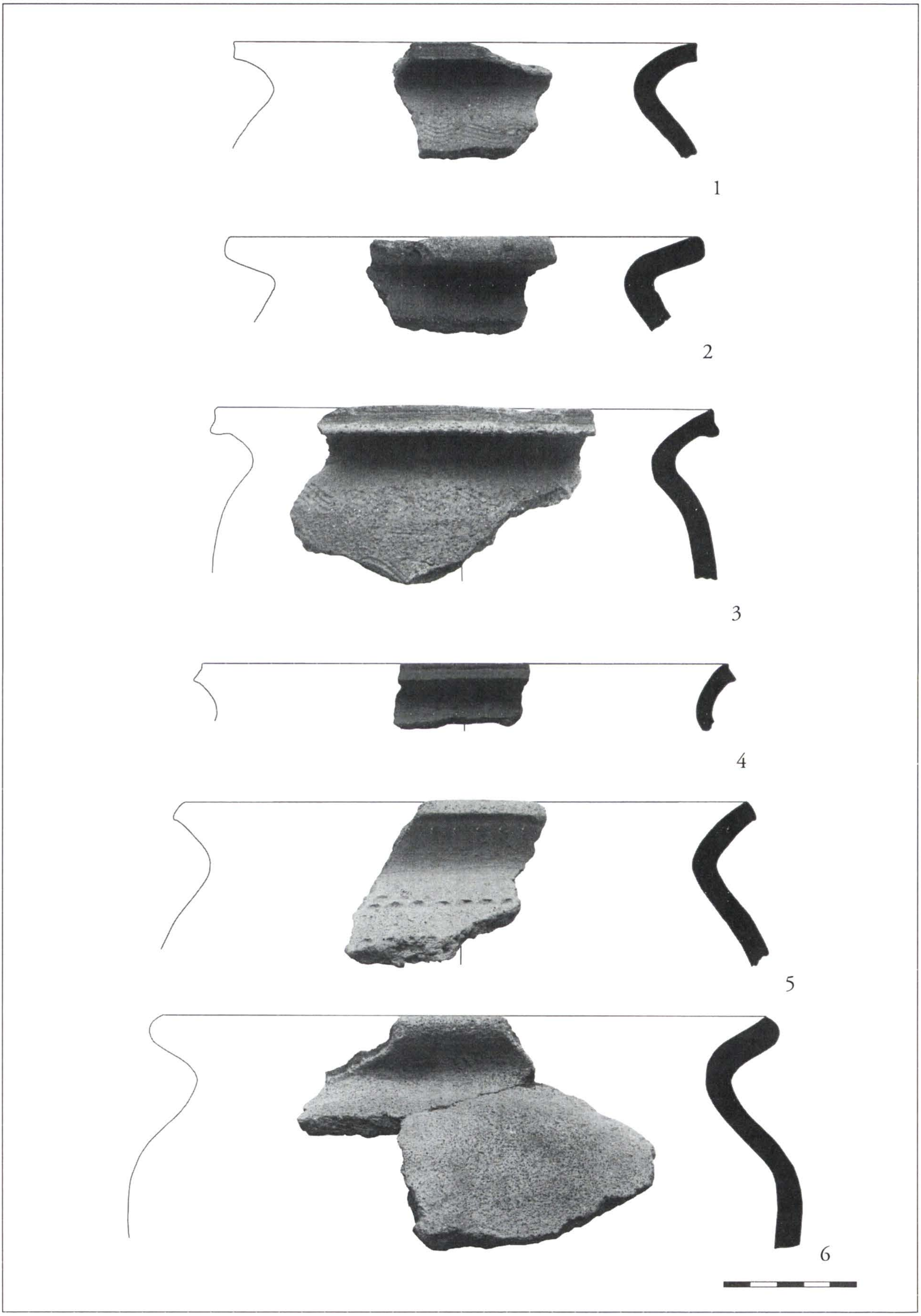

Plate 3. Sângeorgiu de Mureş "Sub Ghera", Árpádian Age pottery.

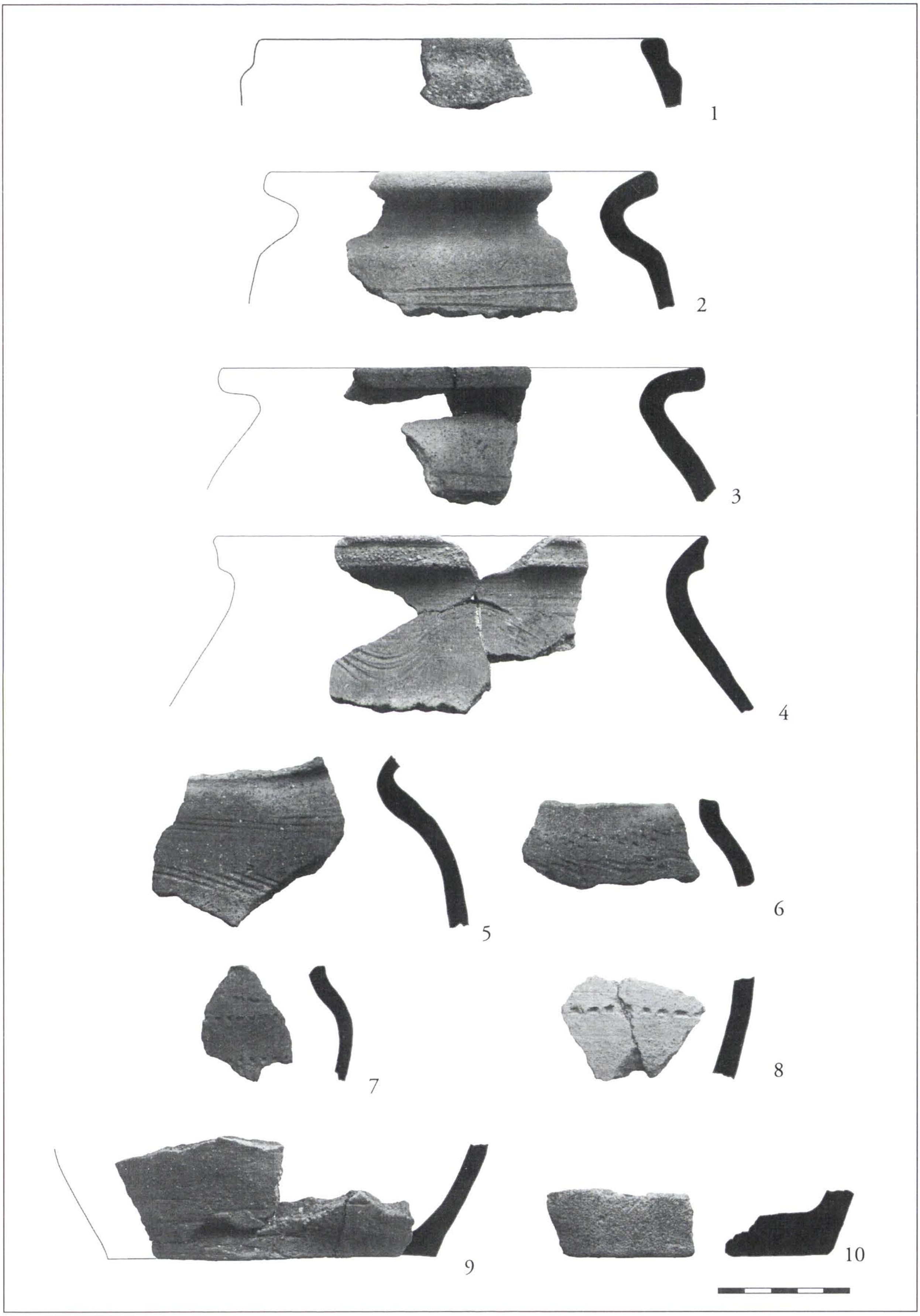

Plate 4. Sângeorgiu de Mureș "Sub Ghera", Árpádian Age pottery.

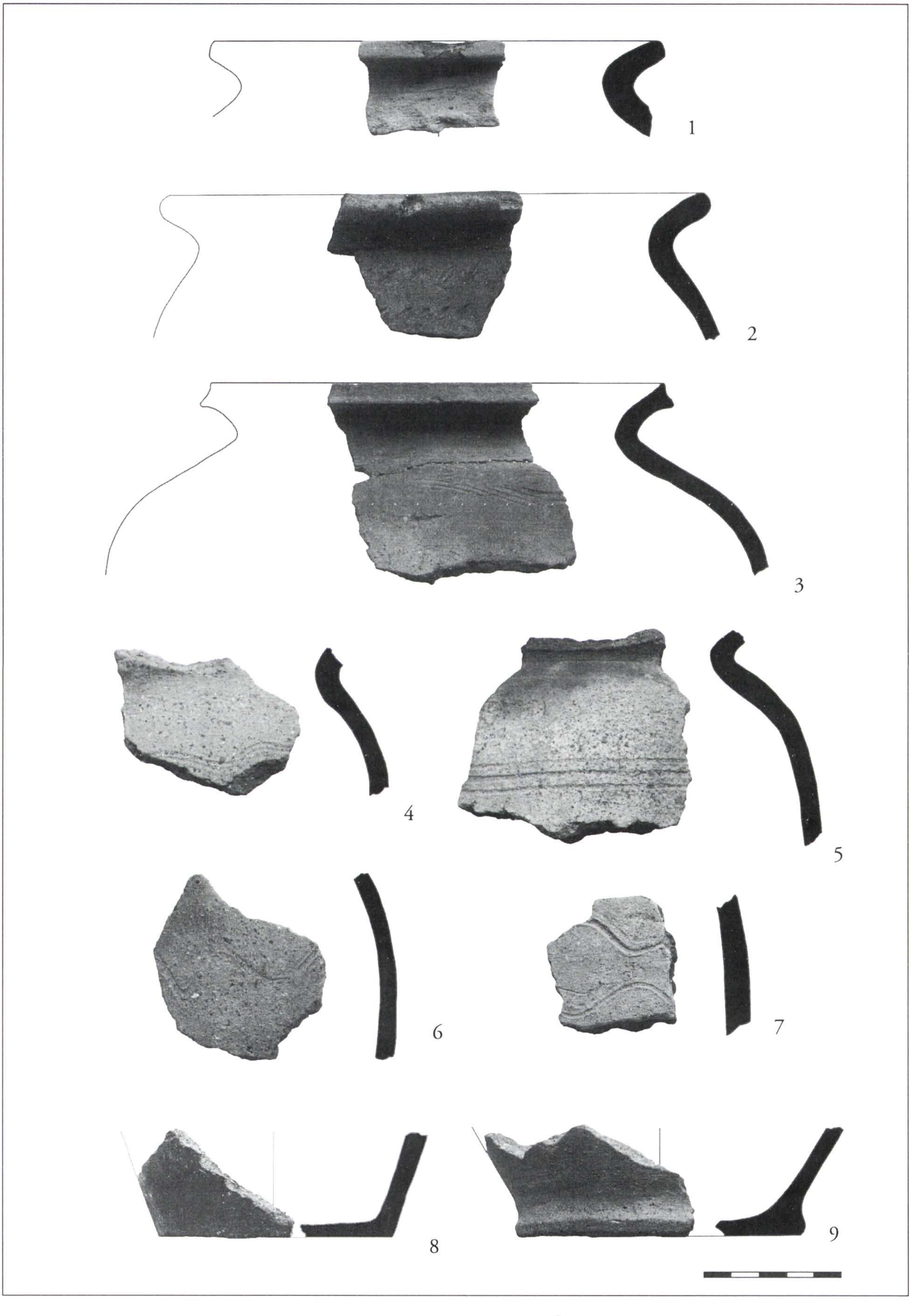

Plate 5. Sângeorgiu de Mureş "Sub Ghera", Árpádian Age pottery.

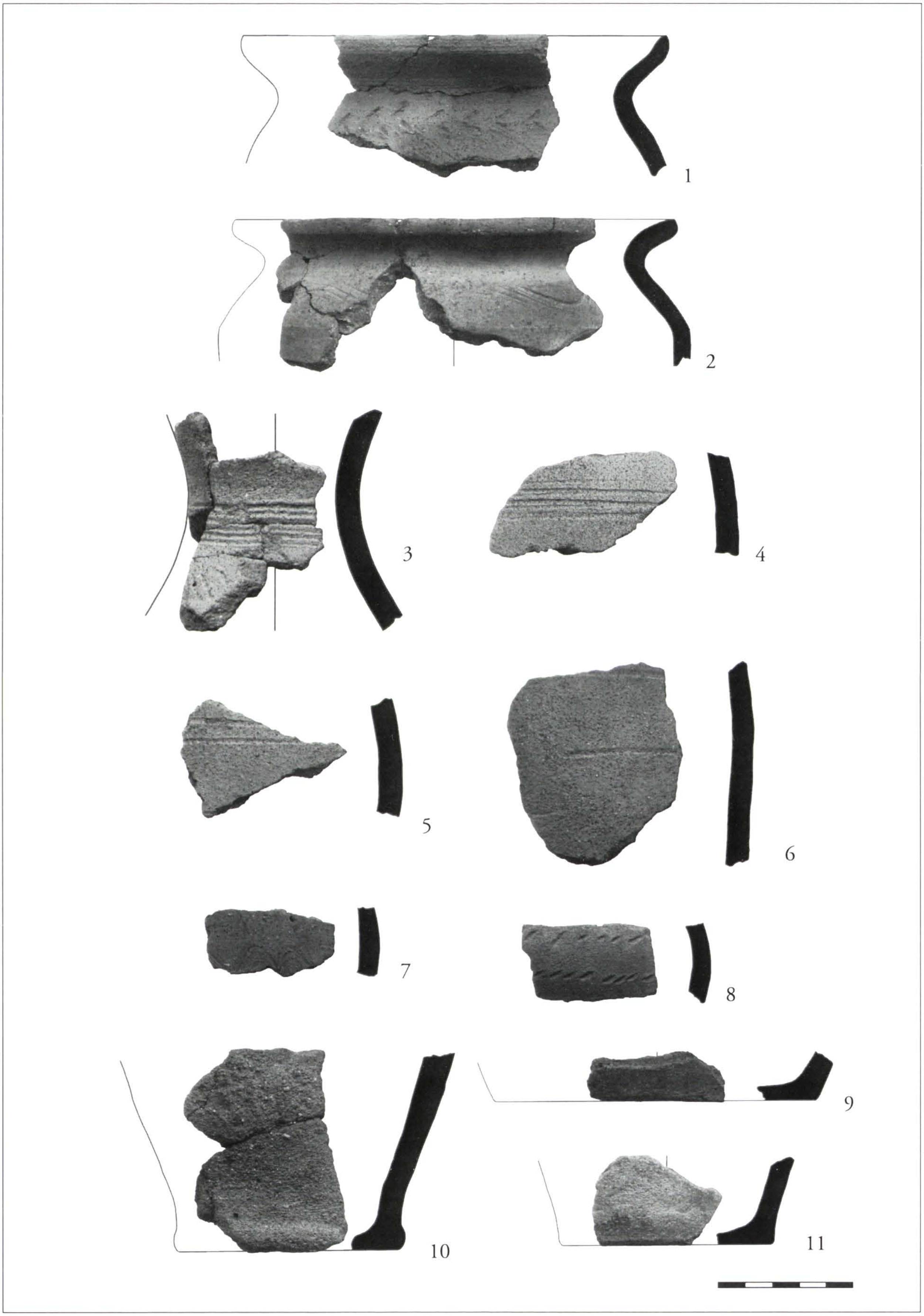

Plate 6. Sângeorgiu de Mureş "Sub Ghera", Árpádian Age pottery from feature Cx1 (1-2, 4-11) and from C4 (3).

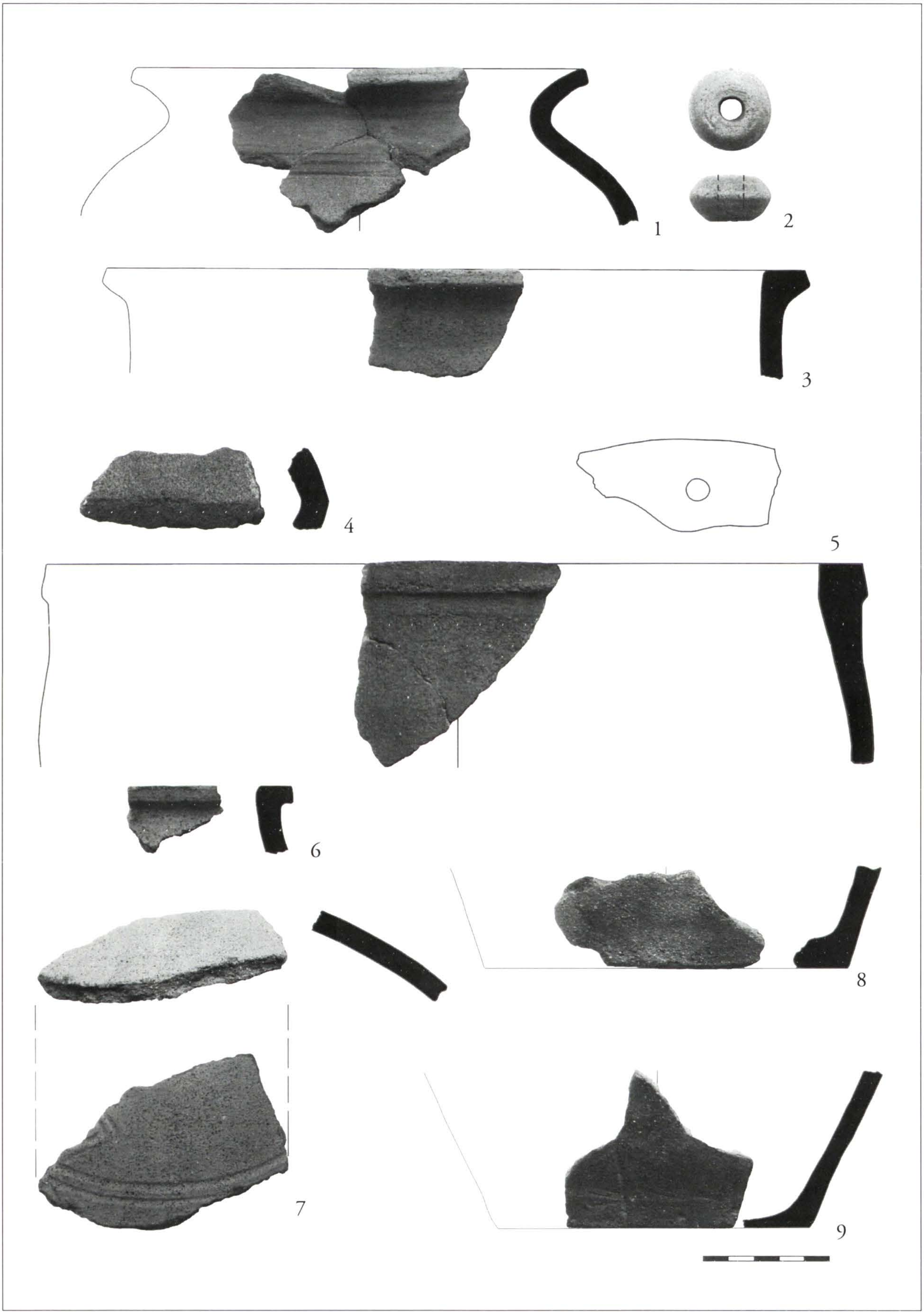

Plate 7. Sângeorgiu de Mureş “Sub Ghera”, Árpádian Age pottery.

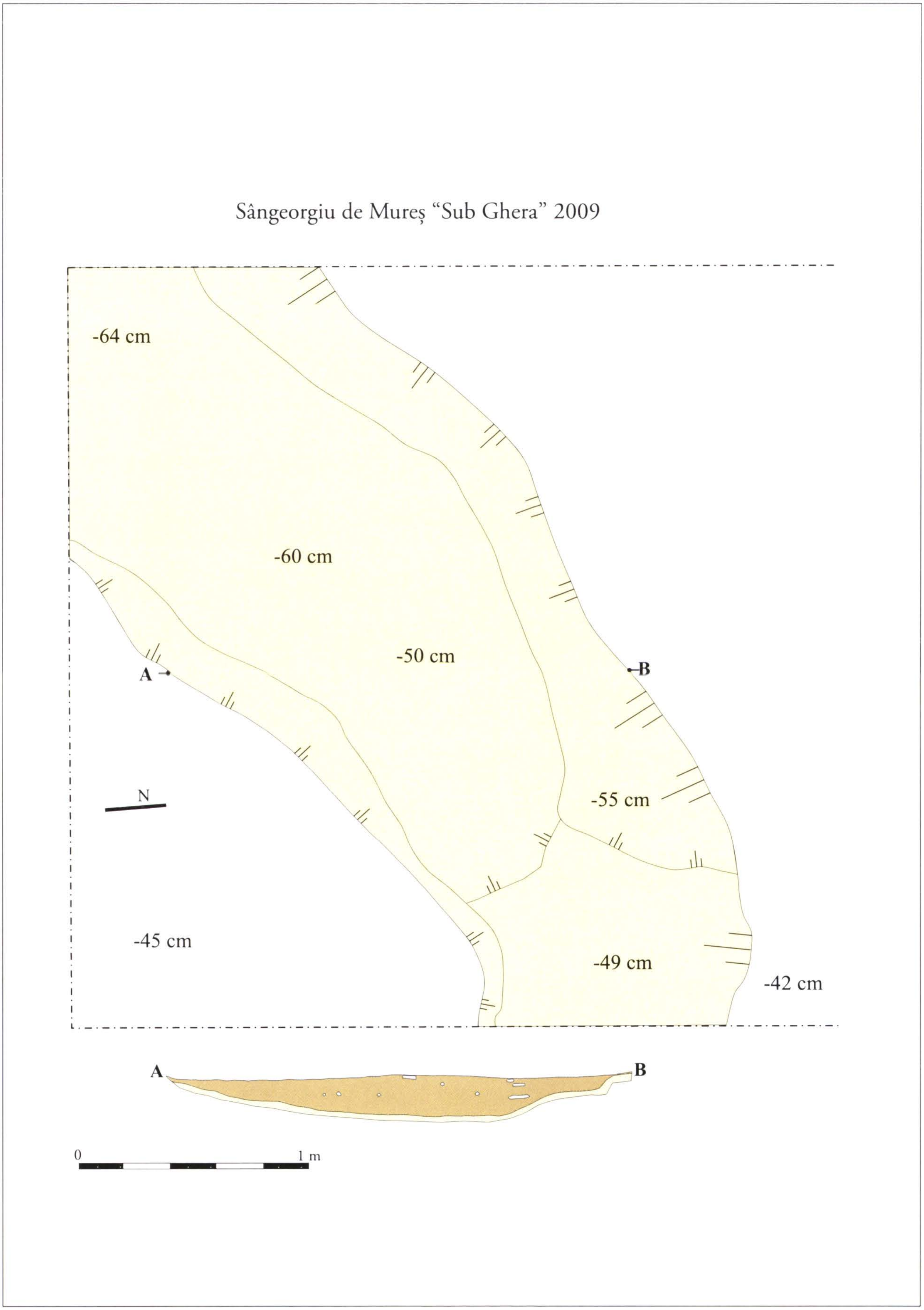
Sângeorgiu de Mureș "Sub Ghera" 2009
-64 cm
-60 cm
-50 cm
-55 cm
-49 cm
-45 cm
-42 cm
A
B
N
A
B
0
1 m

Plate 8. Sângeorgiu de Mureș "Sub Ghera", trench S4, feature Cx2.

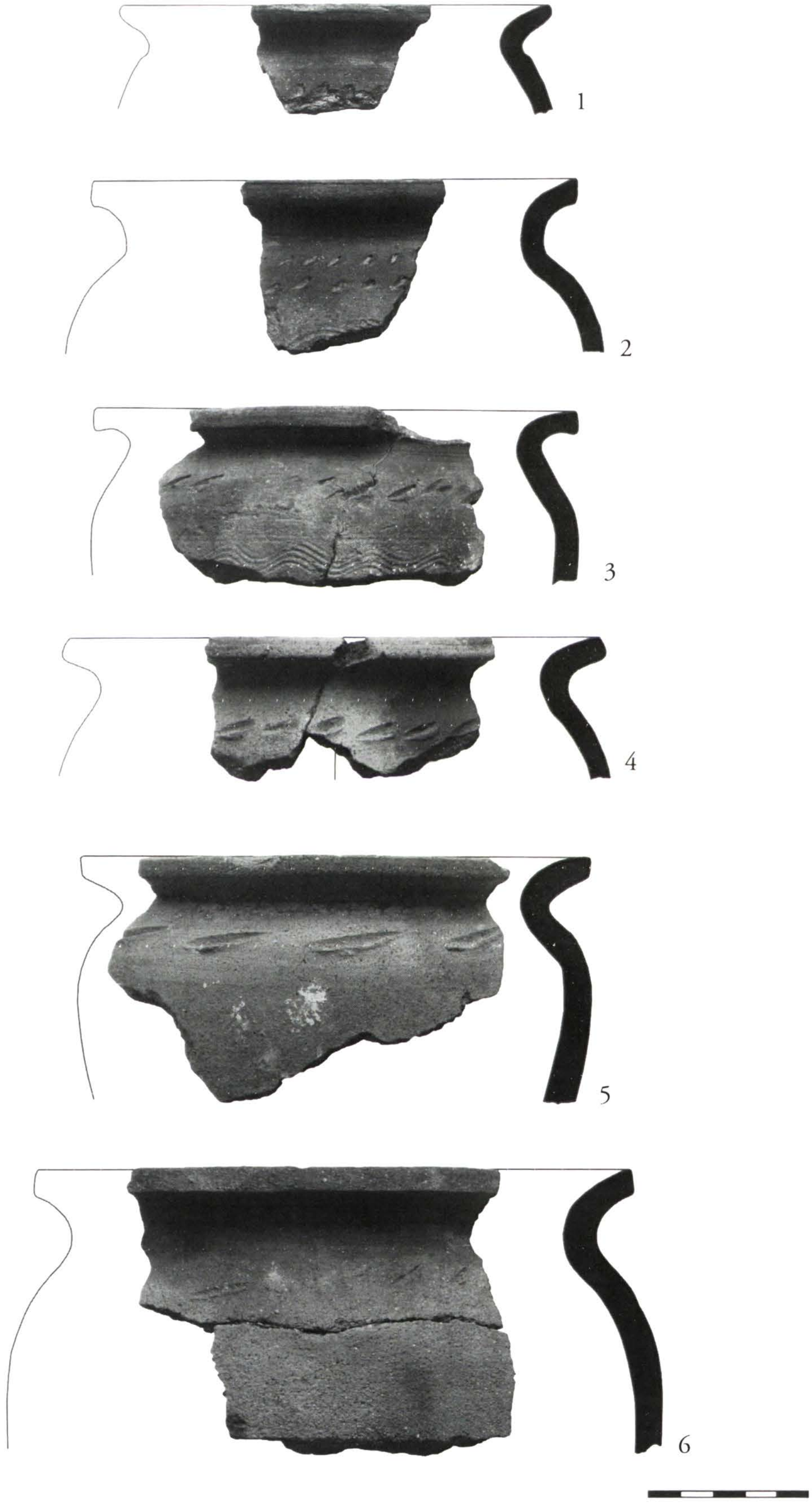

Plate 9. Sângeorgiu de Mureş “Sub Ghera”, Árpádian Age pottery.

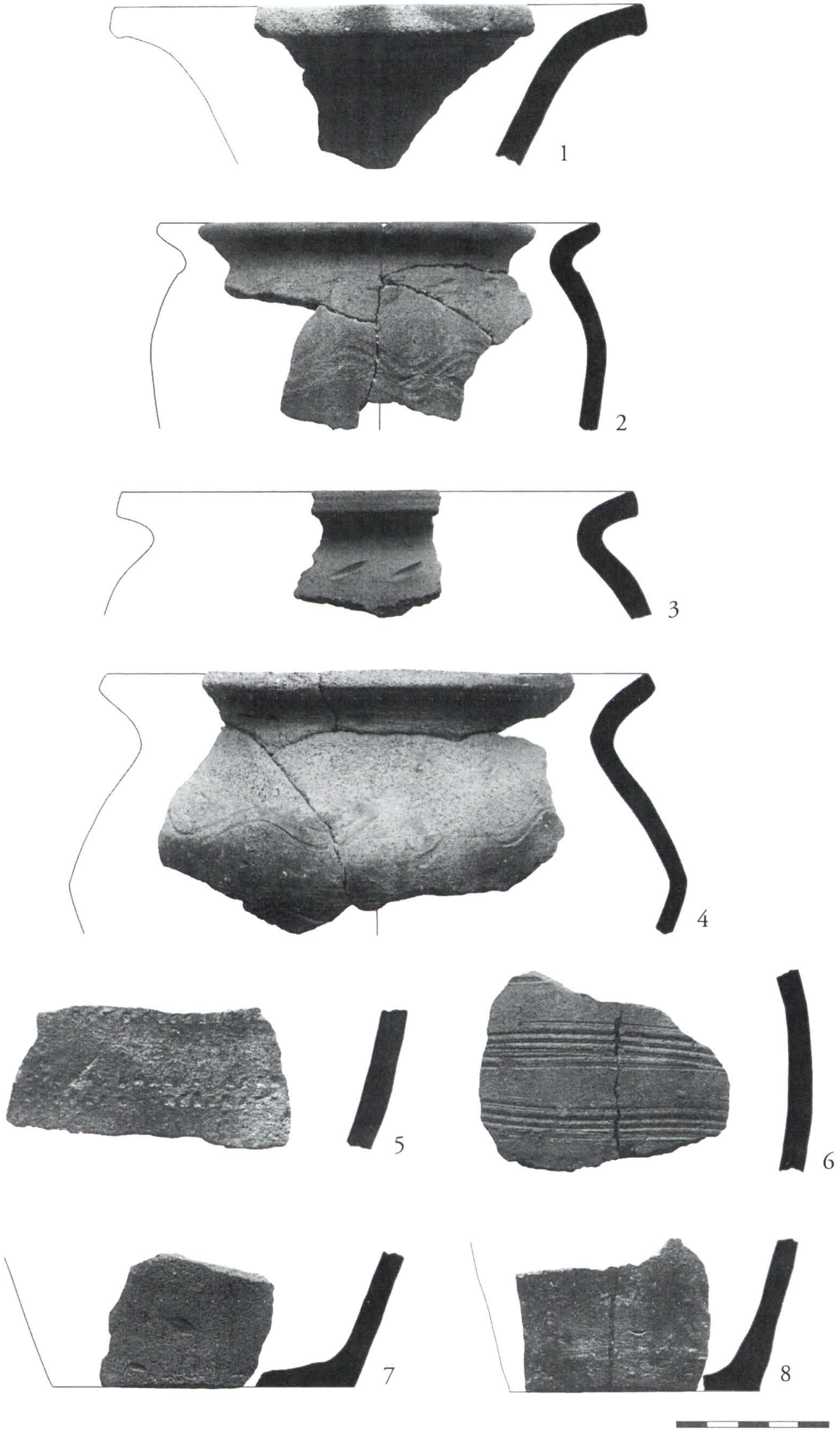

Plate 10. Sângeorgiu de Mureş "Sub Ghera", Árpádian Age pottery.

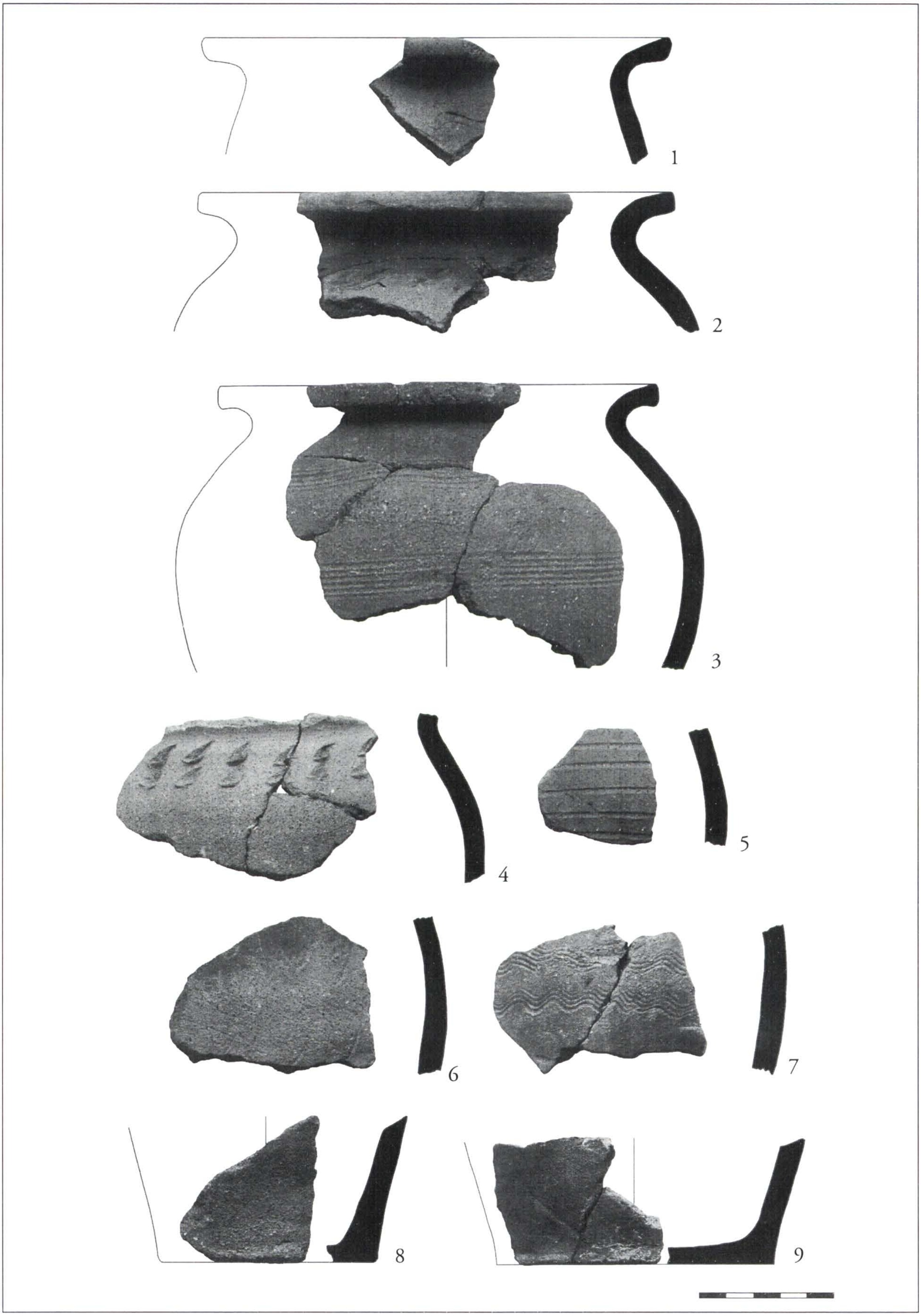

Plate 11. Sângeorgiu de Mureş "Sub Ghera", Árpádian Age pottery.

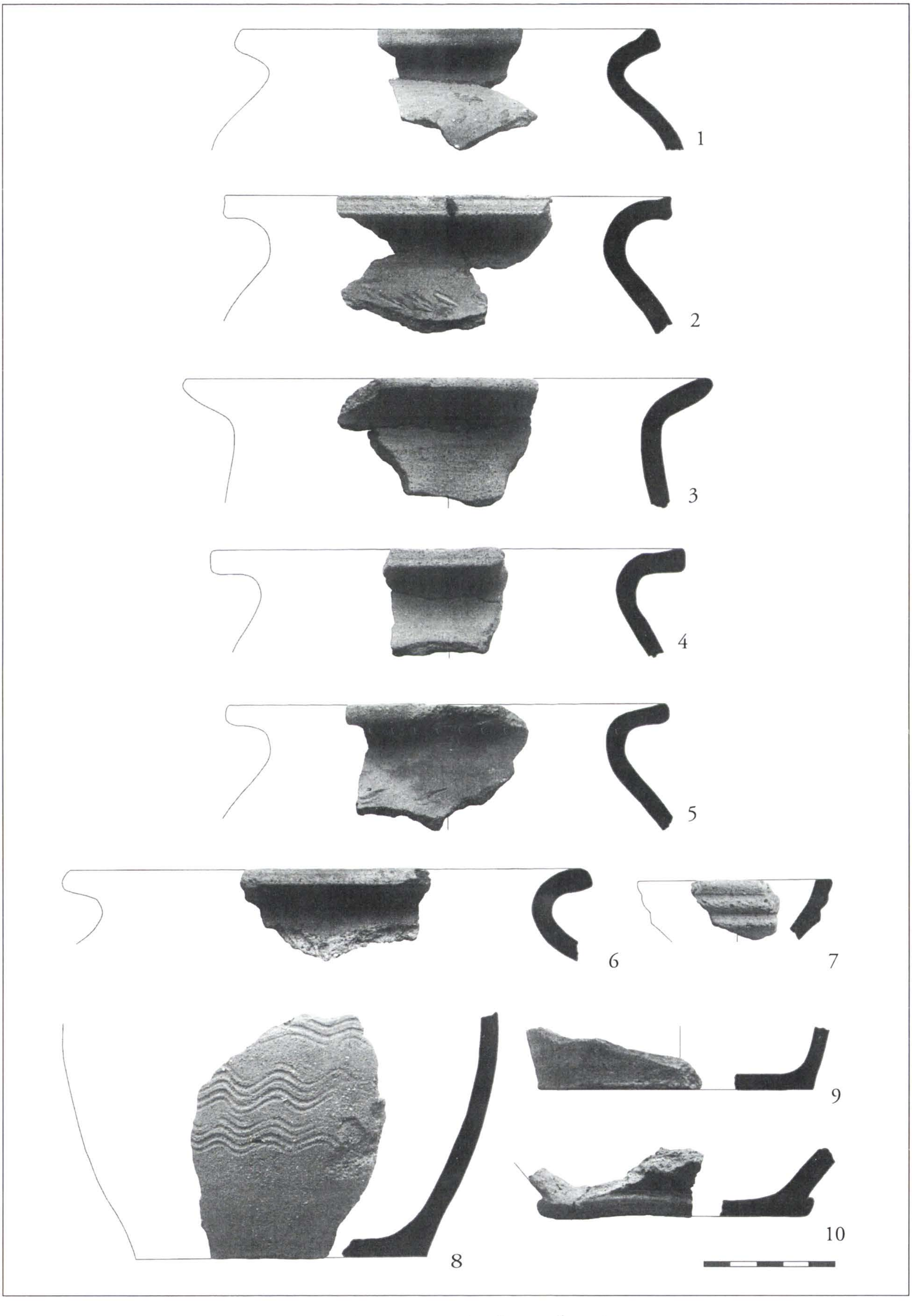

Plate 12. Sângeorgiu de Mureş "Sub Ghera", Árpádian Age pottery.

Some Considerations at the End of a Big Settlement-Project

Miklós Takács

Abstract: *The aim of this study is to present some of the results of the 2017 closed project „The centuries of transformation. The settlements of the central parts of the Carpathian basin in the 8th – 12th centuries" and also to point at some common trends of the settlement archaeology of the early middle ages in Hungary. The analyses, carried out within the frame of the project had resulted with a bulk of important conclusions on the settlement history of the outlined epoch, and also proved the fact, that the evaluation of the great scale rescue excavation has its significance and importance, especially in the field of the Early Medieval archaeology.*

Keywords: *Hungary, settlement archaeology of the Árpádian Age, evaluation of a large-scale research project.*

Introduction. The aim of this study is to present some of the results of the project "Az átalakulás évszázadai – települési struktúrák, települési stratégiák a Kárpát-medence központi részein a 8–11. században" /„The centuries of transformation. The settlements of the central parts of the Carpathian basin in the 8th – 12th centuries" and also to point at some common trends of the settlement archaeology of Árpádian Age in Hungary. The research team was formed due to an obtained grant on 1st January 2013, and existed till 31st August 2017. It was made up of thirteen members, eleven archaeologists and two geochemists. (Counting all members, also those, who participated only a shorter time in the project.) We have formulated the proposal of the project with an aim to carry out the researches as a team consisting at least of 50 percent of younger scholars and/or PhD students. The constant members of the team, i.e. members active throughout the project: Rozália Bajkai, Andrea H. Vaday, Szabina Merva, Ildikó Katalin Pap, Zsolt Petkes, Tibor Ákos Rácz, Melinda Takács, and – last but not least – Mária Tóth. Mónika Mészáros was working in the group in 2013, Katalin Gherdán in 2013–2015. Finally: Dániel Pópity joined the team in 2014, and was active till its end in 2017[1]. The research group was led by the author of the present study, Miklós Takács (Fig. 1, 2). The major part of the group had joined the project continuing to work at the previous workplace, usually in a museum. Two members: Rozália Bajkai and Szabina Merva could also obtain a grant for the years of the project, and to work in the host-institution of the project: HAS Research Centre for Humanities Institute of Archaeology[2].

The research team was formed with the aim to analyse at least 22 Early Medieval settlement excavations, to be precise: settlement phases of the 8th–11th century AD, of sites, that had been excavated in the previous two decades during large scale rescue excavations (Pl. 1). The aim of our research was the description and further analysis of some important trends in the structure of the village-like settlements of the central parts of the Carpathian Basin in the 8th–11th centuries. We had the intention to describe both the similarities as well as the particular characteristics of the settlement structures of the analysed excavations, and a good part of the members of our group had studied the possible impact of the chronology on the inner structure of village-like settlements too.

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[1] We want to hereby express our gratitude to all the members for their scientific achievement, essential in the success of the project.

[2] We want to hereby express our special gratitude to Rozália Bajkai and Szabina Merva not only for their scientific achievement, but also for their essential work in the organisation of the project.

Fig. 1. Group photo of the team on the end of the first, introductory meeting, 24.08.2012. (From left to right: Katalin Gherdán, Ildikó Katalin Pap, Tibor Ákos Rácz, Szabina Merva, Mária Tóth, Mónika Mészáros, Miklós Takács, Zsolt Petkes) (Photo: Gergely Csiky)

Fig. 2. A debate on one of the workshops of the group, 27.06.2014. (From left to right: Tibor Ákos Rácz, Dániel Pópity, Ildikó Katalin Pap, Miklós Takács, Szabina Merva Rozália Bajkai) (Photo: Gergely Csiky)

The main result of the project is, that our research team not only began, but partly also finished the analysis of 36 recently rescued Early Medieval settlement sites of great extension[3] – instead of the previously planned 22 (Pl. 1). We have made steps forward in order to understand the 8th–11th centuries settlement system in many regions of Hungary: the Little Hungarian Plain, the northern part of the course of the Danube, the plain of the county Pest, several regions of the northern and the middle part of the Danube-Tisza interfluves, as well as the northern and the southern parts of the region eastern of the River Tisza[4].

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[3] These sites are: 1. Celldömölk "Vulkán-fürdő"; 2. Celldömölk "Alsó dűlő"; 3. Csanádpalota "Dáli-ugar"; 4. Csanádpalota "Ipari park"; 5. Csanádpalota "Országhatár"; 6. Csanádpalota "Juhász T. Tanya"; 7. Ecser 6. lh.; 8. Ecser 7. lh.; 9. Hajdúnánás "Fekete-halom (M3–41)"; 10. Hajdúnánás "Mácsi-dűlő (M3–47)"; 11. Hódmezővásárhely "Batida, IX. Homokbánya"; 12. Kecskemét "Peczek"; 13. Kemenspálfa "Zsombékos"; 14. Kisvárda; 15. Kompolt "Kistéri tanya"; 16. Lébény "Bille-domb"; 17. Lébény "Kaszás-domb"; 18. Maglód 1. lelőhely; 19. Makó "Dáli ugar"; 20. Makó "Ipari park"; 21. Makó "Mikócsa dűlő (M43–31)"; 22. Máriapócs "Pócsi-Pap-dűlő keleti rész, MOL

The results of the project can be found in a considerable number of papers or in other forms of scientific communications: we have organised two team-conferences, one of them on international level (Fig. 9)[5]. The members of our group have written 63 studies, with the results based or at least partially relying on results of the analyses carried out within the group. One third of these studies are already published[6], the others are in various stages of the editing process. And – also last but not least – six PhD dissertations were begun to be written on the subject of Early Medieval archaeology by the members of our team. Four of them are finished, and already defended. These are the dissertations of Szabina Merva, of Ildikó Katalin Pap, of Tibor Ákos Rácz and of Melinda Takács as well[7]. One dissertation, the thesis of Dániel Pópity is in its end phase of preparing, to be defended in the autumn or winter of 2019.

It is beyond any debate, that the results of a project cannot be presented exclusively by these ciphers. The "deeper" layers of the results represent a bulk of conclusions formulated during and after the process of evaluation of the sites. It is inevitable to give a brief overview of the history of the Early Medieval settlement archaeology in Hungary, in order to see the "research environment" in which the results of our project are going to be evaluated[8].

The brief history of the Early Medieval settlement archaeology in Hungary. We have to begin with the quotation, that the archaeology of the 8th–11th centuries AD – existing in Hungary already in the first half of the 19th century AD – was created and remained as the investigation of cemeteries and grave goods[9]. The predominance of the funeral archaeology – let us repeat – is a common trend also today. One can say concerning the central parts of the Carpathian Basin that the Early Medieval archaeology were characterised even in the first decades of the third millennium as a branch of science relying on cemetery analyses. In spite of the fact, that the first explorations of settlement structures were carried out already on the turn of the 19th–20th centuries, but this were usually based on the analyses of some place names, as well as on the projection of the data of the

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23. lh."; 23. Ménfőcsanak "Szeles-dűlő"; 24. Nyíregyháza "Rozsrétszőlő-Szelkó- dűlő (M3–148/b)"; 25. Nyírtass "Csárda-lapos"; 26. Répcelak "Varga Ottó utca"; 27. Sárvár "Faképi dűlő"; 28. Sárvár "ERTI telep"; 29. Szeged "Öthalom"; 30. Sződ "Nevelek-dűlő"; 31. Sződliget "Csörögi-dűlő"; 32. Táplánszentkereszt "Körgyűrű"; 33. Tolna "Mözs-Községi csádés földek"; 34. Vác "Vár"; 35. Vecsés, 36. lh.; 36. Vecsés, 67. lelőhely. Further on: also three previously excavated, but thoroughly not elaborated sites (Bácsa – Szt. Vid, Visegrád – Sibrik-domb, Visegrád – Várkert dűlő) were drawn in the analyses of one member of our group, as sites of reference.

[4] First, short descriptions of the results of the project: Takács 2013; Takács 2016a, 68–71.

[5] The short summaries of the communications of this conference were printed in: Merva, Bajkai 2015. A part of the studies were published in the Anteus vol. 35–36, 2018: Merva 2018a, 311–326; Robak 2018, 327–344; Filipec 2018, 345–361; Takács 2018b, 363–371.

[6] See e.g.: Bajkai, Kolozsi 2017, 103–137; Bajkai 2014, 29–60; Bajkai 2015a, 7–61; Bajkai 2015b, 227–254; Bajkai 2016a, 417–427; Bajkai 2016b, 31–44; Bajkai 2017, 289–321; Merva 2016a, 463–494; Merva 2016b, 395–406; Merva 2018a, 311–326; Pap 2013, 223–257; Pap 2013, 223–257; Pap 2015, 113–158; Pap 2016a, 258–275; Pap 2016b, 549–555; Pap 2016c 151–168; Pópity 2015a, 91–112; Rácz 2014, 161–184; Rácz 2016a, 103–114; Rácz 2019; Takács Melinda 2014, 41–87; Takács Melinda 2016, 45–58; Takács, Vaday 2012, 743–769; Takács 2013; Takács 2014, 137–149; Takács 2016a, 68–71; Takács 2017, 5–14; Takács 2018a.

[7] Merva 2018b; Pap 2016d; Rácz 2016b – this dissertation was recently published as a monograph: Rácz 2019; Takács Melinda 2018.

[8] The history of this branch of archaeology was summarized in Méri 1952, 49–56; Kovalovszki 1985, 41–49; Takács 2010, 1–4.

[9] The axiomatic value of this conclusion can be clearly seen also in the newest overview of the archaeology in Hungary: Vida 2003, 302–307; Szőke 2003, 312–317; Révész 2003, 338–343.

later written sources, mainly onto the 12th or even 13th century AD[10]. First settlement excavations were started only in the times between the two World Wars, i. e. in 1930s. The characteristic of the very first settlement excavations in Hungary was the absence of the worked-out methodology for excavation and the documentation of the dug out features was usually also carried out on a low level[11]. Therefore possesses the vast majority of these fieldworks only the value of being among the first excavations of village-like settlements in Hungary.

A great step in the excavation and analysis of Early Medieval settlement features was made by István Méri in the beginning of 1950s. He is usually praised as an archaeologist, who introduced a precise methodology in the excavation of settlement features. But he was also the scientist, who formulated the basic data, and also the way of interpretation of the majority of settlement features: the Grubenhaus-type houses, the single ovens, the trenches, etc. Therefore possesses his excavation in Tiszalök "Rázom" as well as the preliminary report[12] of this excavation an epochal character concerning the archaeology of the Árpádian Age. Concerning the Avar Age has the rescue excavation and the monographic evaluation of the site Dunaújváros "*Öreghegy*" by István Bóna published in 1973[13]. Before the end of the 1980s the small-scale extension of the single excavations represented the major obstacle in the formulation of questions connected with settlement structures. The vast majority of the researchers published analyses connected to the problems of the single settlement features; the analysis of the houses of the so-called Grubenhaus-type gained the biggest recognition[14]. Concerning both the Avar and the Árpádian Age the publication of several excavations of the 1960s and '70s verified the thesis of István Méri that although village-like settlements were generally of a little extension, the houses stood densely only at a few spots within the settlement[15]. There were also some sites, where peculiar rows of houses were also identified[16]. Bearing a question hardly to be answered: where were these houses really standing not only in the same chronological phase, but also in the same chronological segment, were these really contemporaneous? However, due to the problematic dating of single objects, in the case of several sites it cannot be decided whether this "density" of the objects is the consequence of a cluster-like disposition of many features used at the same time, or the graphic reflection of several objects with a different chronology on a single ground plan.

At the end of the 1980s began in Hungary a new era not only in the Early Medieval settlement archaeology, but also in the whole archaeology. Rescue excavations with huge dimensions started[17], a new scale was introduced not only in the archaeological fieldwork, but also in the evaluation of single sites (Fig. 3, 4). According to a data-sampling carried out in 2010 there were in the period between 1988–2010 approximately 550 protective excavations accomplished on 8th – 14th centuries settlements in Hungary. The average extension of a rescue excavation on a settlement from 8th – 13th centuries was 2,4 ha[18].

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[10] This fact can be seen also from the overviews about the settlements forms or everyday life of the Árpádian Age, written at the end of the 1930's: Mendöl 1939, 193–212; Balogh 1938, 559–594.

[11] Szabó 1938, 13–27.

[12] Méri 1952, 49–67.

[13] Bóna 1973.

[14] A general overview of the analyses of the Grubenhaus-type buildings in Hungarian and in German language: Takács 1999, 93–129; Takács 2002b, 272–290.

[15] Méri 1952, 56–58.

[16] Nice examples for these rows of houses were discovered on the site of Tiszalök – Rázom, a row with six items (Méri 1952, fig 2.) and another one on the site Veresegyház – Ivacs, consisting also six items (Mesterházy 1983, fig. 2).

[17] A general overview of these fieldworks: Takács 2010, 1–67. First overviews of the rescue excavations led on sites included in our project: Raczky *et al.* 1997; T. Németh, Takács 2003, 97–139; Takács 1996a, 197–217; Takács 1996b, 379–382; Takács 1998, 181–191; Takács 2002a, 170–178; Takács 2006, 537–565; Takács 2008a, 401–420; Takács 2008b 231–243; Takács, Vaday 2004, 7–104; Takács, Vaday 2012, 743–769; Tari 2006; Vaday, Takács 2011, 519–604.

[18] Takács 2010, 1. – with the description of the method of the estimation.

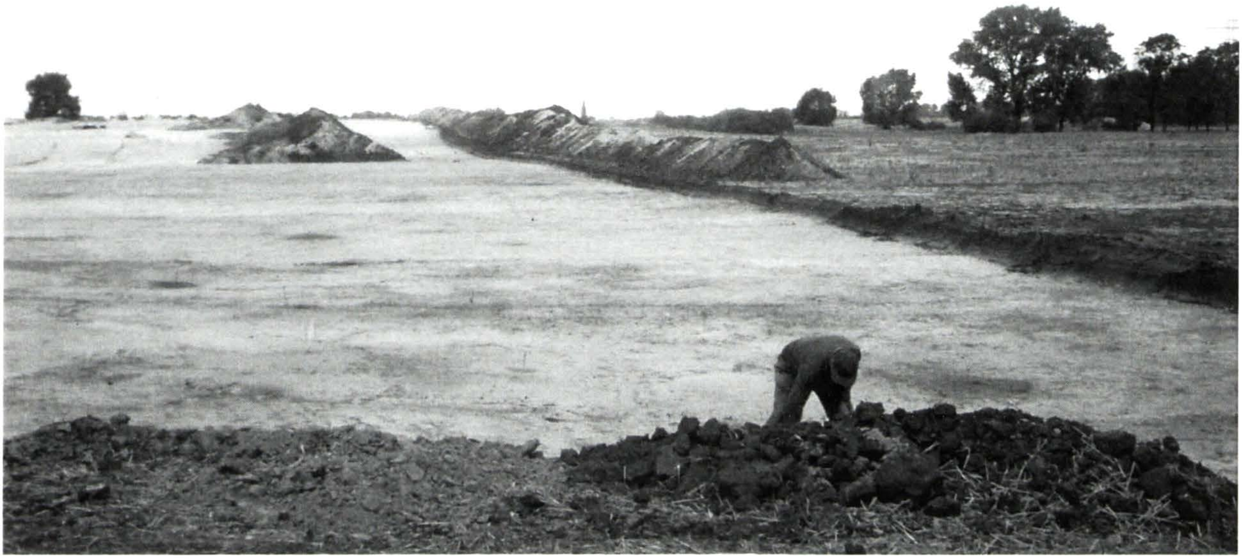

Fig. 3. The site of Lébény – Bille-domb, after the removal of the top layer of the soil by machines (Photo: Miklós Takács)

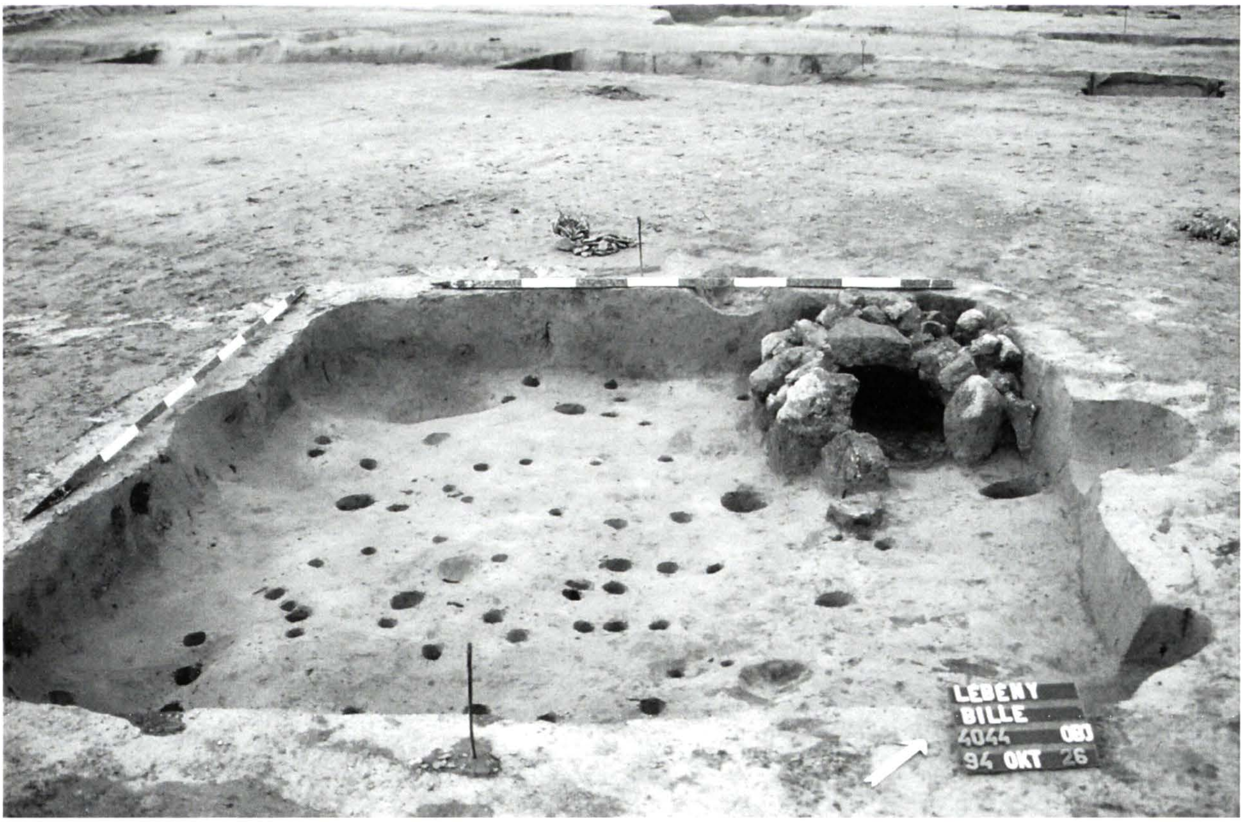

Fig. 4. Archaeological remains of a Grubenhaus-type house: Lébény – Bille-domb, feature Nr. 4044 (Photo: Miklós Takács)

In 2010 the archaeological excavation on the site of Budapest – Kána had the biggest extension, as it was carried out on a surface of 22 ha[19]. The total extension of the 8th – 13th centuries settlement excavations carried out between 1988 and 2010 was to be estimated from 800 to 1000 ha[20]. The total number of excavated bigger settlement features (houses, single ovens, storage pits, ditches, wells etc.) could be estimated between 23 000 and 26 000[21]. A new data sampling would certainly give considerably bigger ciphers. It can be presumed that the ciphers to be obtained in 2019 would be somewhere around the double of those, collected a decade ago. We refer only to the fact, that – if we collect the data on excavated surfaces till 2018 – the first price in the imaginary competition for the site with the biggest rescued surface has to be given to the Kecskemét – "Mercedes factory ground II" site with its extension of cca. 150 hectares[22]!

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[19] Terei 2005, 37.

The analyses of these excavations of immense scale are connected with several problems, hard to be solved[23]. The first and most obvious problem in the evaluation of the rescue excavations with immense extension is also in Hungary, and concerning to all archaeological epochs, the immense quantity of work to be put in the analysis, if we want to have not only the interpretations of some single, chosen archaeological items or objects, but also a well founded general overview. But there is also a second, likewise difficult, though rarely quoted question: how to define the most appropriate scale for the analysis. Concerning the first question the great obstacle is the lack of physical and human resources, concerning the second form the unsolved status of the outlined general dilemma a hardly evitable hint. As a consequence of these two obstacles one can observe a specific duality in the research of the archaeological remains of the Early Medieval village-like settlements at the beginning of the second decade of the 21st century. Due to the fact, that the immense quantity of data from excavations is elaborated only by a scarce number of publications containing referring to little part the collected data. This situation minimizes the possibility of formulating well-grounded conclusions. The outlined dilemma can be solved by the usage of a holistic approach, instead of making partial analyses[24]. The main target would be in this case not only to analyse single features or artefacts, but also to find clues in the processed site itself for its analysis as a whole unit. As we treat the excavated settlement features and artefacts as parts of a whole unit, we have to make efforts in han-

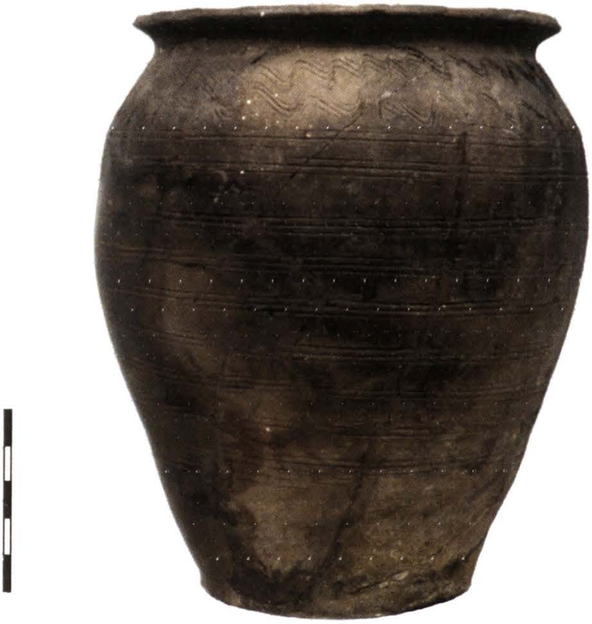

Fig. 5. A pot from the site Lébény – Bille-domb, filling of the the feature Nr. 4044 (Photo: Tibor Kádas)

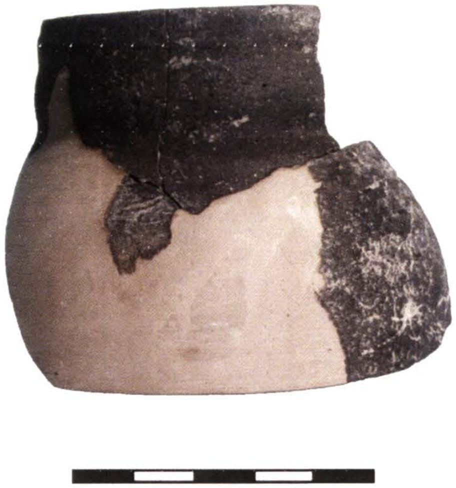

Fig. 6. Fragments of a pot with ribbed neck from the site Lébény – Bille-domb, filling of the the feature Nr. 2138 (Photo: Tibor Kádas)

dling the results of the analyses of single features as small parts of a big but unique mosaic, no matter how widespread the partial analyses in their range and methodology are (Fig. 5–8).

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[20] Takács 2010, 1.

[21] Takács 2010, 1.

[22] This cipher was given by G. Sz. Wilhelm in his presentation of the new excavations on the given site: Wilhelm 2018.

[23] A general overview about these problems: Takács 2017, 5–14.

[24] Takács 2017, 8–10.

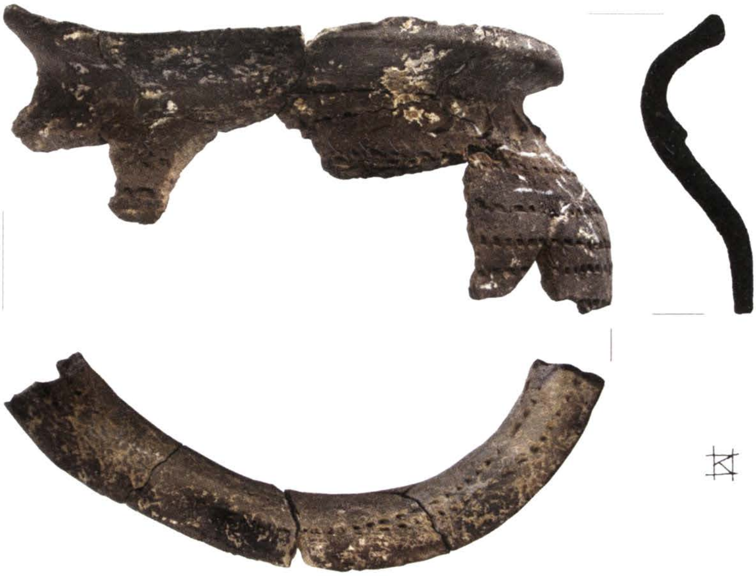

Fig. 7. Fragments of a pot with cogwheel-pattern: Sárvár – Faképi-dűlő, filling of the feature Nr. 668 (Photo: Ildikó Katalin Pap)

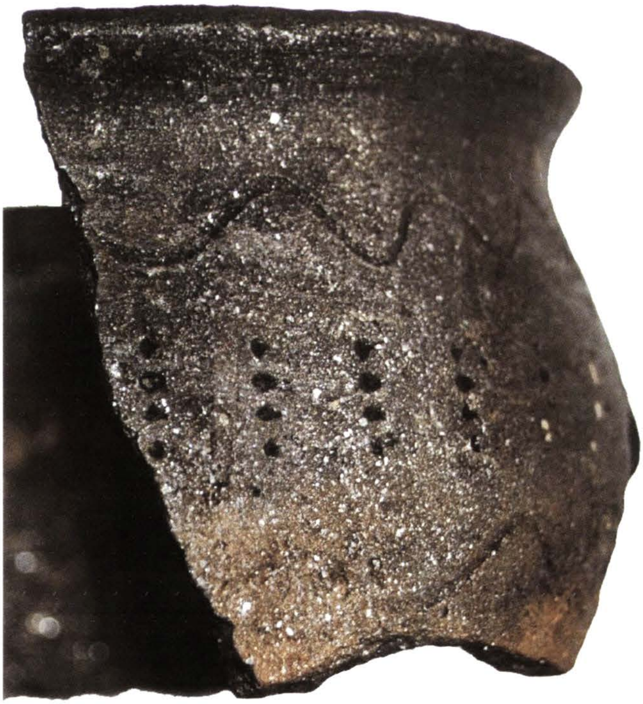

Fig. 8. Fragment of a pot with graphite: Répcelak-Galagonyás, filling of the round house (Photo: Ildikó Katalin Pap)

The main results of the project. We can summarize the brief overview of the previous analyses carried out on the field of Early Medieval settlement archaeology with a conclusion, that the only way to step forward was and is the publication of at least one part of the excavations, where the extension of the fieldwork, as well as the number of excavated items allow not only the interpretation of single settlement features, but also the analysis of settlement structure and settlement pattern. This was the main target of the research group of the project “The centuries of transformation” during its whole existence between 2013 and 2017 (Fig. 9).

Fig. 9. The participants of the international conference in the so called Jacobine Hall of the former building of the Archaeological Institute of the HAS. 9.12. 2015 (Photo: Péter Hámori)

The main questions of the researches in our group had targeted the description of the transformation of Early Medieval settlement structures and settlement patterns in the 8th–11th centuries. in the Carpathian Basin. The source material for the investigation formed – as previously several mentioned – Early Medieval settlement phases of more dozen large scale rescue excavations, but in our plans we had also foreseen a massive usage of the results archaeometrical analyses. In this context, we had the intention to investigate basically three archaeological and one historical research question.

– Our first task was the establishment of a chronological frame, in order to have a fix and stable "grid" where we can attach the results of the settlement-analyses.

– Our second task was to analyse the Early Medieval settlement structures and features of the chosen sites, and to create a classification of these structures and features, to enable the analysis of their temporal changes.

– Our aim was also to study of the relationship between the investigated sites and their micro region by an environmental archaeological approach.

– In addition to these questions we had also the intention to compare the results of our researches with the relevant historical events of the researched period. (These are: the collapse of the Avar Khaganate at the beginning of the 9th c., the Hungarian Conquest between 894 and 900 and the foundation of the Hungarian State in 1000 or 1001.)

The first priority of our project – as previously mentioned – was the analysis of ceramics and to work out of chronological frames on regional base. The analysis of ceramics had proved our presumption, that the description of the formal spectrum makes sense only in smaller regions. Therefore can the outlining of a precise chronology, only be made more accurate on this, local level. (Cf. the results of the analyses of Rozália Bajkai, Szabina Merva, Ildikó Katalin Pap, Dániel Pópity, Zsolt Petkes, Tibor Ákos Rácz, Melinda Takács, Miklós Takács, and Andrea Vaday[25]). The

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[25] Bajkai, Kolozsi 2017, 103–137; Bajkai 2014, 29–60; Bajkai 2015a, 7–61; Bajkai 2015b, 227–254; Bajkai 2016b, 31–44; Bajkai 2017, 289–321; Merva 2016a, 463–494; Merva 2016b, 395–406; Merva 2018a, 311–326; Pap 2013, 223–257; Pap 2015, 113–158; Pap 2016a, 258–275; Pap 2016b, 549–555; Pap 2016c 151–168; Pópity 2015a,

C–14 measurements were made on circa 70 samples within the project. Such amount of research was not yet done in the context of Early Medieval settlements in Hungary. We treat as an achievement of the project not only the outlining of several, regionally-based chronologies for Western Hungary, the Little Hungarian Plain, the region of the curve of the Danube, the Plain of Pest, the middle, or the north-eastern Part of the Big Hungarian Plain, as well as the region around the lower course of the river Maros, but also the fact, that these chronologies do not correspond totally with each other (cf. the problem of the appearance the so called cogwheel-pattern[26].) These discrepancies are according to our point factors to support the credibility of the worked-out regional chronologies.

The other priority of our project was the analysis of the settlement structures, and the plans of whole excavated parts of the settlements, proving that – despite the seemingly irregular shape – the settlements had their priorities in spatial organization. (Cf. the results of the analyses of Rozália Bajkai, Szabina Merva, Ildikó Katalin Pap, Dániel Pópity, Zsolt Petkes, Tibor Ákos Rácz, Melinda Takács, and Miklós Takács[27].) The following questions of settlement topography were in this context investigated: the micro topography of the acquisition of water, the places of the storage and preparation of food, as well as the localization of the parts of settlements connected with animal husbandry or with handicraft activity, finally the examination of possible traces of the separation of settlement parts used by smaller groups, e.g. families. As a general conclusion one can say that, though concerning the middle parts of the Carpathian Basin, the village-like settlements of this era seem to carry also local characteristics, especially in their structure, they have also a high extent similar to village-like settlements of Eastern Central Europe, and it differs from the settlement pattern of the Eastern European steppe region.

The archaeometrical study of various types of artefacts carried out within the frames of our project proved the far-reaching relations of Early Medieval village-like settlements in the supply of raw material which was another important achievement of the project. The analysis of the composition of graphite import ceramics, grinding stones and ferrous slags proved the far-reaching relations of Early Medieval village-like settlements in the supply of raw material which was another important achievement of the project. (Cf. the results of the analyses of Rozália Bajkai, Szabina Merva, and Ildikó Katalin Pap[28]. Important conclusions on the different strategies of animal husbandry could be deduced from the percentage of meat consumption. (Cf. the results of the analyses of Szabina Merva)[29].

Finally, it also has been shown, that the turbulent history of the 8th–11th-century in the Carpathian Basin was usually not identified in the archaeological remains of contemporaneous rural settlements. (Cf. the results of the analyses of Szabina Merva, Ildikó Katalin Papp, Dániel Pópity, Tibor Ákos Rácz, Melinda Takács, and Miklós Takács)[30]. To be more precise: on none of the processed settlement excavations were identified traces of a quick and violent abruption[31]. A

91–112; Rácz 2016a, 103–114; Rácz 2019; Takács Melinda 2014, 41–87; Takács Melinda 2016, 45–58; Takács, Vaday 2012, 743–769; Takács 2014, 137–149; Takács 2016a, 68–71; see also: Takács, Vaday 2004, 7 – 104; Vaday, Takács 2011, 519–604; Takács 2012, 145–166.

[26] The two different standpoints were formulated by Ildikó Katalin Pap (Pap 2013, 223–257) and Szabina Merva as well (Merva 2016a, 468, 470.).

[27] Bajkai, Kolozsi 2017, 103–137; Bajkai 2014, 29–60; Bajkai 2015a, 7–61; Bajkai 2015b, 227–254; Bajkai 2017, 289–321; Merva 2016b, 395–406; Merva 2018a, 311–326; Pap 2016a, 258–275; Pap 2016b, 549–555; Pópity 2015a, 91–112; Rácz 2014, 161–184; Rácz 2019; Takács Melinda 2014, 41–87; Takács Melinda 2016, 45–58; Takács 2013; Takács 2016a, 68–71; Takács 2017, 5–14.

[28] Bajkai 2016a, 417–427; Merva 2016a, 488; Pap 2013, 252; Pap 2015, 117; Pap 2016a, 260; Tomka, Merva 2016, 253–285.

[29] Merva 2016b, 395–406.

[30] Merva 2016a, 463–494; Merva 2016b, 395–406; Merva 2018a, 311–326; Pap 2016c 151–168; Pópity 2015b; Rácz 2016a, 103–114; Rácz 2019; Takács Melinda 2014, 41–87; Takács Melinda 2016, 45–58; Takács 2018a.

[31] This fact was in detail elaborated by the author of this study: Takács 2018a.

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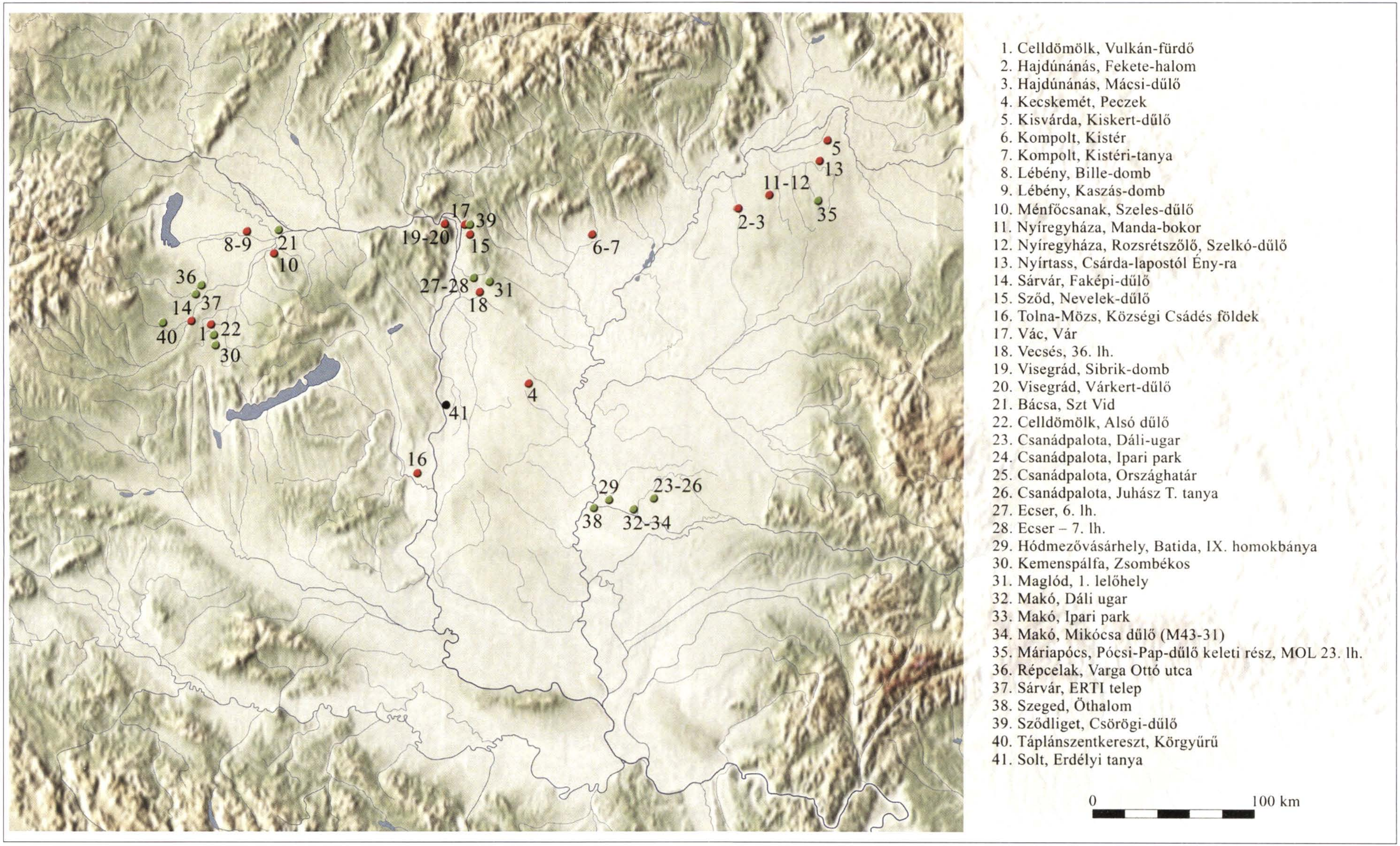

1. Celldömölk, Vulkán-fürdő
2. Hajdúnánás, Fekete-halom
3. Hajdúnánás, Mácsi-dűlő
4. Kecskemét, Peczek
5. Kisvárda, Kiskert-dűlő
6. Kompolt, Kistér
7. Kompolt, Kistéri-tanya
8. Lébény, Bille-domb
9. Lébény, Kaszás-domb
10. Ménfőcsanak, Szeles-dűlő
11. Nyíregyháza, Manda-bokor
12. Nyíregyháza, Rozsrétszőlő, Szelkó-dűlő
13. Nyírtass, Csárda-lapostól Ény-ra
14. Sárvár, Faképi-dűlő
15. Sződ, Nevelek-dűlő
16. Tolna-Mözs, Községi Csádés földek
17. Vác, Vár
18. Vecsés, 36. lh.
19. Visegrád, Sibrik-domb
20. Visegrád, Várkert-dűlő
21. Bácsa, Szt Vid
22. Celldömölk, Alsó dűlő
23. Csanádpalota, Dáli-ugar
24. Csanádpalota, Ipari park
25. Csanádpalota, Országhatár
26. Csanádpalota, Juhász T. tanya
27. Ecser, 6. lh.
28. Ecser – 7. lh.
29. Hódmezővásárhely, Batida, IX. homokbánya
30. Kemenspálfa, Zsombékos
31. Maglód, 1. lelőhely
32. Makó, Dáli ugar
33. Makó, Ipari park
34. Makó, Mikócsa dűlő (M43-31)
35. Máriapócs, Pócsi-Pap-dűlő keleti rész, MOL 23. lh.
36. Répcelak, Varga Ottó utca
37. Sárvár, ERTI telep
38. Szeged, Öthalom
39. Sződliget, Csörögi-dűlő
40. Táplánszentkereszt, Körgyűrű
41. Solt, Erdélyi tanya

Plate 1. Archaeological sites analysed in the frames of the project: "The centuries of transformation. The settlements of the central parts of the Carpathian basin in the 8th – 12th centuries".

Abbreviations

ActaArchHung	Acta Archaeologica Academiae Scientiarum Hungariae, Budapest
AUSAE	Acta Universitatis Sapientiae, Agriculture and Environment, Cluj-Napoca
Agria	Agria. Annales Musei Agriensis. Az egri Dobó István Vármúzeum Évkönyve, Eger
Angustia	Angustia. Muzeului Național al Carpaților Răsăriteni, Sfântu Gheorghe
Antaeus	Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae, Budapest
Alba Regia	A Szent István Király Múzeum Évkönyve, Székesfehérvár
AMN	Acta Musei Napocensis, Cluj-Napoca
AMP	Acta Musei Porolissensis, Zalău
AIIA	Anuarul Institutului de Istorie și Arheologie, Cluj -Napoca
Aluta	Aluta, Sfântu Gheorghe.
Apulum	Acta Musei Apulensis. Series Archaeologica et Anthropologica, Muzeul Național al Unirii Alba Iulia, Alba Iulia
AIM	Arheologičeskie Issledovanija v Moldavii, Chişinău
Arheologičeskie Otkrytja	Arheologičeskie Otkrytja v SSSR, Moscow
Archaeologia Bulgarica	Archaeologia Bulgarica. Nous Publishers Ltd., Sofia
ArhVest	Arheološki vestnik, Ljubljana
ArhSofia	Arheologia Sofia. Journal of the Institute of Archaeology with Museum – Bulgarian Academy of Sciences, Sofia
ArchÉrt	Archaeologiai Értesítő, Budapest
ArhMed	Arheologia Medievală, Reșița-Cluj-Napoca-Brăila
BCH	Bulletin de Correspondance Hellénique, Paris
Banatica	Muzeul Banatului Montan, Reșița
Balcanoslavica	Balcanoslavica, Prilep
B.AM	*Brukenthal Acta Musei.Muzeul Național Brukenthal, Sibiu*
CommArchHung	Communicationes Archaeologicae Hungariae, Budapest
CCA	Cronica Cercetărilor Arheologice, București
Dacia N. S.	Dacia. Recherches et découvertes archéologiques en Roumanie. Revue d'archéologie et d'histoire ancienne. Nouvelle serie, Bucarest
DMÉ	A debreceni Déri Múzeum Évkönyve, Debrecen
Dolg	Dolgozatok az Erdélyi Nemzeti Múzeum Érem- és Régiségtárából, Cluj-Napoca / Kolozsvár
EphNap	Ephemeris Napocensis, Cluj-Napoca
EM	Erdélyi Múzeum, Cluj-Napoca / Kolozsvár
HOMÉ	A Hermann Ottó Múzeum Évkönyve, Miskolc
JPMÉ	A Janus Pannonius Múzeum Évkönyve, Pécs
Izvestija Chişinău	Izvestija Moldavskogo filiala Akademii Nauk SSR (= Izvestija Akademii Nauk Moldavskoi SSR), Chişinău
Izvestija Sofia	Izvestija na Arheologičeskija Institut, Sofia
Keramik 1994	Č. Staňa (Hrsg.), *Slawische Keramik in Mitteleuropa vom 8. bis zum 11. Jahrhundert. Kolloquium Mikulčice, 25.–27 Mai 1993*, ITM, vol. I. Brno 1994.

Kratkie Soobščenija	Kratkie Soobščenija (Instituta istorii materialnoij kultury Akademii Nauk SSSR), Moscow
Marisia	Marisia. Studii și materiale, Muzeul Județean Mureș, Târgu Mureș
Magazin istoric	Magazin istoric. Revistă de cultură istorică, București
Mny	Magyar Nyelv. A Magyar Nyelvtudományi Társaság Folyóirata, Budapest
MCA (SN)	Materiale şi Cercetări Arheologice (Serie Nouă), Bucureşti
MASP	Materialy po Arheologii Severnogo Pričernomorja, Odessa, Kiev
MIA	Materialy i Issledovanija po Arheologii SSSR, Moscow-Leningrad St. Petersburg
MittArchInst	Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften, Budapest
MFMÉ	A Móra Ferenc Múzeum Évkönyve. Új folyam, Szeged
MNAIM	Muzeul Naţional de Arheologie şi Istorie a Moldovei, Chişinău
NyJAMÉ	A nyíregyházi Jósa András Múzeum Évkönyve, Nyíregyháza
Peuce	Peuce, Tulcea
Pontica	Pontica, Constanța
Savaria	Savaria, A Vas Megyei Múzeumok Értesítője, Szombathely
SlAntiq	Slavia Antiqua, Poznań
SlovArch	Slovenská Archeológia, Bratislava
SovArh	Sovetskaja Archeologija, Moscova
ŠZ	Študijné Zvesti. Archeologického ústavu Slovenskej Akadémie Vied, Nitra
SCIV(A)	Studii şi Cercetări de Istorie Veche (şi Arheologie), Bucureşti
StComMB	Studii și Comunicări Muzeul Brukenthal, Sibiu
StComit	Studia Comitatensia, Szentendre
StudUnivCib	Studia Universitatis Cibiniensis. Series Historica, Sibiu
Tibiscum	Tibiscum. Studii și Comunicări de Etnografie și Istorie, Caransebeș
Tibiscus	Tibiscus, Timișoara
Transilvania	Transilvania, Sibiu
ZalaiMúz	Zalai Múzeum, Zalaegerszeg
Zgodnji Slovani	M. Guštin (Hrsg.), *Zgodnji slovani. Zgodnjesrednjeveška lončenina na obrobju vzhodnih Alp/Die frühen Slawen. Frühmittelalterliche Keramik am Rand der Ostalpen.* Ljubljana 2002
ZSA	Ziridava Studia Archaeologica, Complexul Muzeal Arad, Arad

ISBN: 978-606-020-193-9
9 786060 201939
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